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THE

MEDICAL RECORD

A Weekly Journal of Medicine and Surgery

EDITED BY

GEORGE F. SHRADY, A.M., M.D.

SURGEON TO ST. FRANCIS HOSPITAL; CONSULTING SURGEON TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK; PRESIDENT OF THE PRACTITIONERS' SOCIETY OF NEW YORK; AND EX-PRESIDENT OF THE N. Y. PATHOLOGICAL SOCIETY

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Original Articles.

ALEXANDER'S OPERATION ("SHORTENING OF THE ROUND LIGAMENTS").[1]

WITH A REPORT UPON FIFTEEN CASES IN BELLEVUE HOSPITAL.

BY WILLIAM M. POLK, M.D.,

PROFESSOR OF OBSTETRICS, UNIVERSITY MEDICAL COLLEGE, NEW YORK.

THE remarks indulged in to-night concerning this operation are based upon the results of my labors in Bellevue Hospital.

I have not had sufficient time to study the latest reports from Great Britain, France, or America—the three countries in which the most attention has been paid to it—so that to-night I simply present the outline of my own work, unbiased by that of others. Those who wish to look more deeply into the subject I refer to the little book issued by Mr. Alexander, to the article of Mr. Adams in the *Glasgow Medical Journal*, to an extensive article by M. Doleris, in *Nouvelles Archives d'Obstetrique et de Gynécologie*, No. 1, January 1886, and to the latest one from Mr. Alexander, in the *British Gynecological Journal*, November, 1885.

The situation, origin, attachment, and function of the round ligaments are sufficiently well known to this audience to spare me the necessity of entering into any anatomical or physiological discussion concerning them. There are two points, however, toward which I should direct your attention; these are, their ability to withstand traction, and the effect of the operation upon them and upon the adjacent structures. These ligaments are considered of so little importance, in the non-pregnant state particularly, that we have been in the habit of regarding them as trivial in all respects, certainly as having little capacity to resist anything like prolonged strain.

The observations upon this point made by my colleague, Professor Williston Wright, are, independent of the experience gained by the operations, conclusive. I removed the outer two inches of both ligaments in our case, and handed them to Professor Wright, that he might test their strength by attaching weights to them. This was done, and he reported that one of them broke only when the weight had reached five pounds; the other at four and three-quarters; the portions tested, remember, being the weakest part of the ligaments, the outer ends. By the time that the break occurred they had become stretched to about twice their normal length, but the stretching did not begin until the weight had reached two and three-quarter pounds with one, and three pounds with the other. If, now, we remember how much less than three pounds any prolapsed or retroverted uterus will weigh, it is seen that any part of the ligament is sufficiently strong to answer the objects of the operation. It has been my good fortune to examine and note the position of the uterus, round ligaments, and folds of the broad ligaments in a case which had been operated upon some ten months before, by actually placing my fingers directly upon these parts. It was a case in which the uterus had been held down by a fibroid tumor upon its posterior aspect. The ligaments had been shortened, and the uterus, with its fibroma, was lifted forward and upward, so that the fundus was in the plane of the superior straight. But relief had not been obtained, and the patient, who at the time of Alexander's operation had refused to have Hegar's operation done (removal of the ovaries), now consented to this latter procedure. This offered me an excellent opportunity to observe how far the uterus had maintained its position, as also the condition of affairs about the broad ligaments. The uterus was found to have remained in the position gained for it in the original operation, and the upper border of the broad ligament was spread out like a web, between the round ligament in front, which was moderately taut, and the line occupied by the tube and the infundibulo-pelvic ligament behind, which was also taut. There was no thickening or other pathological condition of these structures. This action upon the upper border of the broad ligament, spreading it out, is what one would naturally expect, and is in miniature what happens, as the uterus, rising in pregnancy, makes taut these same anterior and posterior lines. It was of interest, likewise, to note that the ovaries and tubes were lifted well up, but otherwise were unchanged.

The effect of equal traction upon both of the round ligaments is to lift the fundus of the uterus forward and upward, which movement is in direct proportion to the amount of traction, until the fundus is placed immediately behind the symphysis pubis, where it will stop. If the traction be made upon one ligament only, the fundus will be drawn to one side and upward, until it rests on the pelvic brim, about at the pectineal eminence. In other words, the uterus will follow traction made upon the round ligaments until it is drawn to the anterior and upper parts of the pelvis. Thus, if it be desired to lift the entire organ well upward and forward, as in procidentia, one may rely upon its accomplishment through this traction. And if this be so in these extreme cases of displacement, certainly it will answer in simple posterior displacement, with little or no descent, in which we merely wish to make the organ rotate upon its transverse axis, and perhaps lift it to but a slight degree. These assertions can be verified on either the dead or living body by any competent operator.

I have now and then heard it said that those who have performed the operation upon the cadaver have found some difficulty in drawing the ligaments out from the inguinal canal. I can readily understand this, as it was my own experience in the first dissection made; but I have never had the least trouble in drawing them out on the live subject. I think the difference can be accounted for by the fact that, in the condition of *rigor mortis* (the condition in which such dissections are usually made), the separation of all tissues is more difficult than in the living subject.

A question which at once presents itself is, What would happen should pregnancy occur? Will the uterus be able to rise into the abdominal cavity? This to me was the one possible objection to the operation, until one of my own cases became pregnant, where I have been able to watch the result. The uterus has now completed its sixth month of gestation, and but for a dragging pain along the round ligaments, I have been unable to detect any important deviation from the normal course. The ligaments can be easily felt through the abdominal wall, a rare possibility in pregnancy under other conditions. Mr. Alexander, I believe, has reported several cases that have gone on to term without accident of any kind.

Another question which suggests itself is as to the state of the bladder after the operation. All the cases have been questioned upon this point before leaving the hos-

[1] A paper read before the New York Academy of Medicine, June 17, 1886.

pital, and some several months after. Each one has told me that they suffered no inconvenience with that organ —being able to retain the water as long as usual.

What I have said as to the behavior of the uterus as a result of traction upon the round ligaments, sufficiently explains the *modus operandi* of the operation in relieving the condition to be specified, and the experiments of Professor Wright answer the question as to the ability of these comparatively slender structures to withstand any strain that they might possibly be called upon to bear.

But the crucial test is the clinical result. A number of cases have already been reported by others, and now I beg leave to add fifteen to the list, comprising, as they do, all the patients upon whom I have performed this operation.

Case I.—M. Mc——, aged twenty-three. Uterus retroverted, enlarged, and tender. Suffers from menorrhagia. Has made repeated attempts to wear a pessary, but could not bear the pain it caused. Uterus was curetted, and two weeks later an attempt at Alexander's operation was made. At the expiration of three-quarters of an hour one round ligament had been found, shortened, and stitched in place. The shortening of the second was deferred. The patient expressed so much relief that she was allowed to leave the hospital temporarily, but she did not return. The uterus was drawn to one side and lifted forward, so that it was in the position of latero-version. This operation, though imperfect because of my lack of skill, gave the patient so much relief that she expressed herself as content with the result.

Case II.—J. G——, aged thirty-five. Extreme retroflexion. Cannot wear a pessary. Menstruation irregular and profuse. Bowels constipated, and every movement of them accompanied by pain. Has habitual backache. Operation performed March 16th, 1885. Discharged cured, May 15th. Uterus well up and anteverted.

Case III.—A. M——, aged thirty. This is the case of uterine fibroma mentioned above, in which Hegar's operation was subsequently performed. The result of Alexander's operation was to lift and keep the uterus in a position of anteversion for ten months—in fact up to the date when last seen, which was a year after the original procedure.

Case IV.—A. R——, aged thirty. Uterus retroflexed and left ovary prolapsed. Cannot wear a pessary because of its pressure on the ovary. Suffers constantly from dragging pains in the lower part of the abdomen and the back. Operation performed April 28, 1885. Discharged, cured, June 10th. Uterus anteverted and well up.

Case V.—E. J——, aged thirty. Uterus prolapsed, so that when standing the cervix rests at the ostium vaginæ. It is somewhat enlarged. Suffers from backache and irritability of the bladder. A pessary has been found useless. Operation performed June 17, 1885. Discharged, cured, July 19th. A small sinus remains at the site of the left incision. Uterus drawn well up behind the symphysis, the fundus being about on a level with the superior strait.

Case VI.—A. S——, aged thirty-four. Uterus retroverted, large, tender, and soft. Cervix lacerated, but not ulcerated. She has backache, menorrhagia, and profuse uterine leucorrhœa. A pessary has been tried repeatedly; it caused so much pain it could not be worn. The patient suffers a great deal from nervousness and palpitation of the heart. Operation performed September 21, 1885. The incisions did not heal well, profuse suppuration taking place in both. Slow healing by granulation, therefore, was the result. With this exception she made a good recovery, leaving the hospital with the uterus anteverted and in excellent position, December 7, 1885. She became pregnant about December the 17.

Case VII.—B. C——, aged fifty-one. Fourteen years before entering the hospital prolapse of the uterus occurred as the result of heavy lifting. This has grown steadily worse until the uterus, at the time of this observation, was entirely without the vulva, the vagina being everted. The uterus, even after the patient had been confined to the bed in the hospital for two weeks, measured four inches. The bladder and rectum participated in the prolapse, and as a result there was much annoyance from frequent and difficult urination and painful defecation. Operation performed October 5, 1885. On November 2d following, the wounds had healed, the uterus was well up behind the symphysis, and measured two and a half inches. On November 16th the vagina was narrowed, and the perineum, which had been torn many years before, was repaired. The patient was discharged early on December 26th, cured; the uterus being then in the same position as placed by Alexander's operation, and measuring two and a half inches, as reported above.

Case VIII.—A. S——, aged thirty-eight. Retroversion of the uterus, the organ being bound down by adhesions. Examination showed also tubal disease. Tait's operation was suggested as the surest measure of relief, but it was declined after the pain and tenderness about the uterus had been relieved. Alexander's operation was performed with the hope that we might be able to overcome the traction of the adhesions. The uterus was drawn into the normal position, and the ligaments were stitched to the pubic bone. But in spite of supporting vaginal tampons, the organ lapsed into its former position, so that on leaving the hospital her condition was much the same as it was on admission.

Case IX.—A. R——, aged thirty-five. Uterus retroverted, large and tender, but movable. Has suffered from the displacement for five or six years. Has been under treatment constantly, but never received benefit. Pessaries could never be worn. Operated upon January 25, 1886, the uterus being easily placed in its normal position. Discharged, cured, March 25th. Examined June 20th. The uterus found in its normal position, and the patient stated that she was perfectly well.

Case X.—Aged forty-five. Uterus retroflexed and bound down by adhesions. She suffered a good deal from pain in the back, and the uterus was tender. Menstruation was going on as usual. Operated upon January 9, 1886. The general result was much the same as in Case VIII., although some relief from the troublesome symptoms was obtained.

Case XI.—A. A——, aged thirty. Uterus retroverted, enlarged, and tender, and, as with all the cases except VIII. and X., the organ was freely movable. The usual symptoms of an enlarged and retroverted uterus were present. Had been under treatment for eight years, during which time every device had been tried for her relief, but all failed. Operated upon March 22, 1886. The uterus was placed in excellent position. She had some suppuration in both incisions, which, in connection with rather a depraved state of the general system, retarded the recovery, so that when she was discharged from the hospital, May 15th, her condition was not as good as was hoped for. The uterus was in excellent position. She was seen again June 20th, and then she was better than she had been in years. All the symptoms belonging to the retroversion had disappeared, but a burning pain in the incisions annoyed her a good deal. The uterus was well up and anteverted.

Case XII—B. K——, aged thirty-eight. Uterus retroflexed, enlarged, and tender. She believes that the displacement resulted from a fall five years before admission to the hospital. Has suffered from the symptoms of posterior uterine displacement ever since. Has never been able to get relief, although she has been under treatment for several years. Operated upon April 13, 1886. Discharged, cured, May 17th, the uterus being in good position, anteverted.

Case XIII.—M. C——, aged twenty-three. Both ovaries prolapsed, slightly enlarged, and tender. The uterus, although sharply anteflexed, is very low in the pelvis. She suffers from dragging pelvic pain, has menorrhagia and dysmenorrhœa. These symptoms have been present only one year. Treatment outside of the

hospital has failed to afford relief. Operated upon April 26, 1886, the uterus and ovaries being lifted up and forward, so that they were well away from the posterior pelvic floor, their former position. Discharged May 26th, the uterus and ovaries in the same position as placed by the operation. The troublesome symptoms have disappeared, and she says she is well.

CASE XIV.—K. C——, aged twenty-seven. Uterus retroverted, large, tender, but movable. She has suffered for six years from the symptoms of posterior displacement and congestion of the uterus. All treatment has proved unavailing. Operated upon May 28, 1886. Uterus placed in the normal position. The right incision suppurated, otherwise the case did well. June 26th: She is now in the hospital, but is doing so well she will be able to leave in a week or ten days.

CASE XV.—A. F——, aged forty-five. Prolapse of the uterus for five years. Operated upon June 23, 1886. The uterus was drawn well up to the symphysis. This is the only case in which I have found the round ligaments fragile. Both of them broke with the ordinary traction before I could draw them from the rings. The canals had then to be opened, the ends were again caught, and by very careful traction I succeeded in getting them well out. The age of the patient would scarcely account for the brittleness, for in Cases VII. and X., the first fifty-one years, the second forty-five, no such condition was found. I can only suggest that possibly it is a condition found in very fat women, for obesity was fully developed in this patient. The ligaments were smaller than in any of the other cases. This patient having been operated upon since my paper was read, too little time has elapsed to make any report upon the result.

A glance at these cases will show that I have applied the operation to all the conditions for which it has been recommended, and to two which have been excluded by the originator of the procedure, the two with adhesions holding the uterus down. The result in these satisfies as to the propriety of excluding all such. So long as the uterus cannot be easily placed in a normal position by the sound, it stands outside the domain of Alexander's operation. Such cases can only be treated successfully by a plan which I have been driven into, namely, by abdominal section; then tearing up the adhesions, and removing the tubes if they require it; but if they do not, by placing a drainage-tube behind the uterus, as we have to do in many ovariotomies, and leaving it in for forty-eight hours. By this method, I believe, we secure permanently an anterior position for the organ.

Recapitulating the conditions for which I have performed Alexander's operation we find them to be: Retroflexions, 4 cases; retroversions, 6 cases; retroversions with prolapsed ovary, 1 case; prolapsed ovaries, 1 case; prolapse of the uterus, 3 cases.

In studying the advantages of Alexander's operation, I confess that its application to cases of prolapse of the uterus has interested me most. At the risk, therefore, of wearying you with a side issue, I will speak more particularly of it. Prolapsus uteri is the joint result of rupture of the perineal structure, and stretching of the uterine ligamentous supports. These supports are chiefly the utero-sacral and basic lines of the broad ligaments. Its principal perineal support is the pubo-coccygeal division of the levator ani, or, as I think it better named, the pubo-perineal division, *enclosed between its layers of fascia.*

The manner of the destruction of the usefulness of this muscle matters but little, the result sooner or later will be the yielding of that portion of the pelvic floor which it guards, and the descent, first, of the vaginal wall, next, of the uterus.

If it were possible in all cases to restore the normal resistance of the pelvic floor we might not find it necessary to do more for the prolapse; but, as a matter of fact, this is rarely accomplished, because of the great difficulty of reaching and uniting the torn ends of the pubo-coccygeal muscle and its fasciæ; or the impossibility of correcting the relaxation due to subinvolution or congenital defect.

That the recognized perineal and vaginal operations fail to reach the essential causes of defect in the pelvic floor is proven by the constant recurrence of prolapse in cases subjected to the most elaborate and thorough operations upon the perineum and vagina. This being so, we must see if aid cannot be obtained from the round ligaments. I am sure that it can be.

It would appear that the prolapse of the uterus is preceded by a backward displacement of it, and there is much reason for believing that if the organ can be kept not only anteverted, but well forward in the pelvis, it will escape the full force of the intra-abdominal pressure and thus avoid prolapse; and again, when prolapse has already taken place, it is natural to suppose that the relaxed ligamentous supports will the more readily regain their normal dimensions and strength if they can be reinforced by some other suspending support. Now by this operation we not only antevert the uterus, but draw it well up and forward, thus giving its ligaments the reinforcement suggested, and if in addition we do what is possible toward the restoration of the pelvic floor, we then will have given the case the best, and, to my mind, the most rational treatment yet devised.

The indications for the operation may now be summed up as follows: Prolapse of the uterus; retroversions and retroflexions of the uterus, in which the organ can be placed in the normal position, and yet a pessary cannot be comfortably worn; prolapse of the ovary, the organ being reducible and not large enough or diseased enough to demand removal.

From this statement it will be seen that the operation has a limited but a well-defined application, and that it reaches cases which, without it, we would either abandon or else subject to graver procedures.

Operation.—I prepare patients for this operation as carefully as I do for an ovariotomy. The bowels are cleared out both by a cathartic and an enema. The food is mainly fluid for thirty-six hours before the patient is placed on the operating-table. Etherization is a necessity. The first step in the operation proper is the shaving of the mons veneris, and then the *thorough* cleansing not only of that space, but the whole of the abdomen and the upper and inner part of the thighs. The vagina should then be carefully washed out with some disinfecting fluid. The entire region is then surrounded with carbolized towels. The operator may now stand between the thighs, which are extended, or else take a position to either side. Next, the guide for the incision is to be sought for, and that is the spine of the pubes. This is to be cut down upon, making the incision parallel to Poupart's ligament, and about two inches or more, if necessary, in extent.

The first objective point is the tendon of the external oblique muscle—for in that lies the external inguinal ring. Having reached it, place a finger on the pubic spine, and slide it upward and outward, about half an inch, then the depression of the ring will be felt. Next clear away all the fat and connective tissue which covers the tendon of the oblique muscle about the ring. In this way it is readily exposed. As you watch it now, you will see a mass of fat and vessels, and sometimes the reddish fibres of the round ligament protruding, and rising and falling with the respiratory movements. This mass should now be seized and drawn out; in a moment the round ligament will come into view; then it should be grasped with the forceps and isolated, continuing the traction it will slide from the ring. If you have mistaken a portion of the tendon of the muscles, you can easily determine the question by running the finger outward along the muscle, for as you make traction you will feel the tendon as a taut line extruding outward above Poupart's ligament. Traction on the round ligament will give no such line. Should you find it necessary to enter the canal in search

of the ligament, in view of the important structures which will be approached, the dissection should be carefully made upon a director.

As soon as one ligament has been isolated, the other should be sought for and isolated in the same manner.

The uterus should now be placed in its normal position, unless the case be one of prolapse of the uterus; then it should be pushed as far up and forward as is compatible with safe pressure.

For this purpose I prefer a sound with as large a bulbous end as can be easily passed into the uterus. The sound is a necessity in cases of retroflexion, but the fingers may be substituted in other cases, being placed either in the vagina or rectum as occasion demands.

The ligaments should now be drawn moderately taut, and stitched to the anterior face of the pubic bone, carefully prepared fine silk being used, three to each ligament sufficing. These, having been cut short, the loose ends of the round ligaments should next be cut away. If the ring gapes, or if you have opened the canal, the columns should be carefully stitched together with silk.

If the incisions have been made through a thick layer of fatty tissue, it is best to introduce bone drainage-tubes, closing the wound around them; but otherwise you may close the wound directly, using deep, silk sutures.

Aseptic cotton tampons are then placed in the vagina, and are allowed to remain for forty-eight hours. I do not know that they are required, but I think it probable that they relieve the strain upon the round ligaments, and thus aid in their secure attachment in the new position. For a month the patient is kept in bed; after that she is allowed to go about at will; but she should be cautioned to avoid straining efforts, for six months at least. Coition should be infrequent for a period of two months, dating from the operation; and this is the more imperative if there be tenderness along the line of the ligaments.

With one patient too frequent indulgence led to a good deal of annoying pain along that line. Mr. Alexander advised, after his early operations, that the patients should wear a pessary for two or three months. I have not found this precaution necessary; all of the patients, so far as I know, having been without them from the date of the operation.

Some operators use but one incision, making it just above and parallel to the crest of the pubes, extending to the outside of each pubic spine. I have not tried this path, consequently I am not in a position to speak of its advantages or disadvantages. I find that an impression prevails to the effect that Alexander's operation is both difficult and dangerous; I cannot say that I have found it so. Any competent surgeon who understands his anatomy, and who is familiar with uterine disorders, can readily perform it, and the dangers are trivial provided the operator is *clean*. Abscesses will develop now and then in the incision, but never if proper precautions are taken, and even when they have occurred with me, no serious result has followed. The question of the development of a cellular inflammation in the broad ligaments, as a consequence of this operation, has also been raised. I can only report that I have had no such result in any of my cases.

Increased experience with the procedure convinces me that it is not a difficult operation, that it is a safe one, and more than all, that it is a valuable addition to the measures of relief which we have to offer to quite a number of weary sufferers.

SMOKING, DRINKING, AND CHEWING.—It is estimated that coca is used by 10,000,000 of the human race; betel-nut by 100,000,000; chicory by 40,000,000; coffee by 100,000,000; 300,000,000 eat, or smoke, hashish; 400,000,000 use opium; 500,000,000 use tea; and all the known people of the earth are addicted to the use of tobacco.

CONSANGUINITY IN MARRIAGE.[1]

BY E. S. McKEE, M.D.,

CINCINNATI, O.

WE find, permeating all classes of all nations, the belief that consanguineous marriages are followed by evil effects upon the offspring. This tradition gains credence from occasional cases where dire results have occurred, and the *post hoc* is taken for the *propter hoc*, the many instances where no evil happened being forgotten.

An endeavor to show the falsity of this belief is the object of this paper.

Attention will be directed, in the greater part, to the marriage of cousins, especially those of the first degree. (This is partially because the majority of consanguineous marriages are between cousins, and because the marriage of relatives nearer than first-cousins, even if proven not to be harmful to the offspring, should be discouraged on other grounds.)

Consanguinity denotes blood relationship. It is quite different from affinity, which signifies relationship by marriage. A man is related to his brother by consanguinity. His wife is related to that brother by affinity.

Lineal consanguinity is that which exists between persons in the direct line of descent or ascent. The consanguinity is collateral when two persons descend from a common ancestor, but not one from the other.

Great confusion has arisen from counting degrees of consanguinity by two different methods. Civil law counts the number of generations up from the one individual to the common ancestor, then down to the other. The canonical law counts the degrees in but one line, the longer, from the common ancestor. The canon law, formulated by Pope Gregory I., A.D. 590–604, is imperfect. It gives persons the same relationship to a certain person when it is not true. Prohibiting marriage in the third degree by the canon law prohibits many more than by the civil law.

The relationship existing between Jupiter and Juno, Osiris and Isis, shows that unions of the closest degrees of consanguinity were not abhorred in ancient mythologies. The story of Œdipus and Jocastra shows that marriage in the direct line of descent was looked upon as impious. The ancient Egyptians intermarried very closely, a large proportion being between brother and sister. The Persians did likewise, as did also the Israelites prior to Moses. Abraham married his half-sister, Sarah; Isaac his first-cousin, Rebekah; and Jacob his two first-cousins, Rachel and Leah. This was a nation renowned for vigor, and in the first fourteen generations reached six hundred thousand fighting men.' The sons of Adam must have married their sisters, and we are all descendants from consanguineous marriages, and, according to some, idiots.

The Mosaic law, Leviticus xviii., prohibits the following marriages: With a parent, step-mother, sister, half-sister, granddaughter, aunt or uncle's wife, step-daughter or step-granddaughter, or with a wife's sister during the lifetime of the former.

The Greeks forbade marriage in the direct line of descent, yet permitted it between half-brother and half-sister. The Athenians allowed marriage between brother and sister of the same father, but not of the same mother. The Lacedemonians allowed marriage between uterine brothers and sisters, but not between those having the same father and mother.

The Romans excluded marriage between brothers and sisters, whole or half, and any marriages nearer in degree than first-cousins were practically illegal. The institutes of Justinian forbade marriage in direct line and in collateral line within the fourth degree. First-cousins and all remoter kin might marry.

The present canon law, in force in most Roman Catholic countries, forbids marriage only outside of the fourth-

[1] Read before the Ohio State Medical Society, at Akron, June 4, 1886.

degree, that is, third-cousins are forbidden to marry. The civil law allows the fourth civil degree, that is first-cousins, to marry.

Henry VIII. modified very stringent marriage laws in England. They are now practically the Levitical. First-cousins may marry, also nephew and great-aunt, niece and great-uncle. While a man may not marry his grandmother, he may his sister. This law holds in Great Britain, Ireland, and the colonies. The law forbidding a man to marry his deceased wife's sister is not Levitical, and despite the annual effort to throw it off, remains in the home country, but has been dispensed with in Canada and Australia.

The Levitical code is followed generally in the various States of this nation, but New Hampshire, Ohio, and Indiana forbid the marriage of first-cousins. Most States forbid a man to marry his aunt or niece, but it is permissible in New York.

Reliable statistics, free from flaws, are exceedingly difficult to procure. The best we can do is to gather all the reliable testimony obtainable.

George H. Darwin, who has so thoroughly studied the marriages between first-cousins in England, says: "It thus appears that in London, comprising all classes, the cousin marriages are about 1½ per cent.; in urban districts, 2 per cent.; in rural districts, 2¼ per cent.; among the landed gentry, 3½ per cent.; aristocracy, 4½ per cent. An average for England of 3 per cent. The average for Scotland is 5¼ per cent. This large percentage leads Mr. Darwin to think that such marriages are more frequent in Scotland than in England and Wales. From the mountainous nature of the country this is, perhaps, to be expected. After a thorough search through the institutions for idiots, insane, deaf and dumb, etc., he found that between 3 and 4 per cent. of these descended from consanguineous marriages. In 366 families, in the urban districts other than London, concerning which accurate information could be obtained, 8—that is to say nearly 2.2 per cent.—were the offspring of first-cousins. From his investigations Mr. Darwin had deduced 2 per cent. as the proportion of first-cousin marriages in these districts. Including 350 cases from Newcastle, concerning which the information is not so accurate, reduces this to 1.9 per cent. Probably 3 or 4 per cent. of the patients in the idiot and lunatic asylums are the offspring of first-cousins. Taking into consideration the inaccuracies of the modes of gaining information, both as to the number of these descending from consanguineous marriages and the percentage of these marriages—3 per cent.—the above cannot be said to be in excess. As to deaf-mutes, the proportion of offspring of first-cousin marriages is precisely the same as the proportion of such marriages to the whole number of marriages. Therefore there is no evidence whatever of any ill-results accruing to the offspring from the cousinship of their parents.

Professor Mantagazza, M. Boudin, and Dr. Balley are of the opinion that consanguinity tends to sterility. After a most thorough investigation, making much use of Burke's "Landed Gentry," and "Peerage," Darwin finds that consanguineous marriages are slightly more fertile than the non-consanguineous. He thinks the cause of this is probably the fact that marriages between first-cousins will be more apt to take place where there is a large group of persons who bear that relationship to each other. In such families fertility will be hereditary. The alleged infertility of consanguineous marriages, whether direct or indirect, cannot be substantiated. Mr. Darwin's investigations concerning the alleged excessive death-rate among the offspring of cousins, although rather meagre and unsatisfactory, tend to invalidate the allegation, yet there remains a shade of evidence that the death-rate is slightly higher than among the families of non-consanguineous parents.

Dr. Crichton-Browne, of the West Riding Lunatic Asylum, England, says: "It has always seemed to me that the great danger attending such marriages consists in the intensification of the morbid constitutional tendencies which they favor. Hereditary diseases and cachexia are much more likely to be shared by cousins than by persons who are in no way related, and these are transmitted with more than double intensity when common to both parents. Persons of similar temperaments ought not to marry."

Dr. Howden, of Montrose Lunatic Asylum, Scotland, says: "As regards insanity, my own opinion is, that unless there exists a hereditary predisposition, the marriage of cousins has no effect in producing it. . . . Neither in insanity, nor in any other abnormal propensity, do two plus two produce four; there is always another factor at work, neutralizing intensification and bringing things back to the normal."

Dr. Lauder Lindsay, Murray Royal Institution for the Insane, Perth, Scotland, is of the opinion that the ill effects of cousin marriages are much less, in regard to insanity, than represented.

Dr. Scott, of Exeter, says that 7 out of 241 families in which deaf and dumb children have been born, were first-cousin marriages. In three or four of these families more than one child was so afflicted.

Dr. Arthur Hopper, of the Deaf and Dumb School at Birmingham, out of sixty-two congenitally deaf children, found not one to be the offspring of consanguineous marriages. He thinks it possible for the deafness to show itself in future generations, though dormant now.

Mr. Neill, of the Northern Counties Institution, Newcastle-on-Tyne, says: "350 have been admitted into the institution, and I think in not more than 6 cases were the parents cousins. In one family, whose parents were cousins, there were four deaf-mutes." Mr. Neill has been engaged in the tuition of the deaf and dumb for more than forty years. He thinks the offspring of cousins so affected fewer than supposed.

Mr. David Buxton, of Liverpool, thinks that one in ten of the deaf and dumb in his school descend from consanguineous marriages.

Mr. William Sleight, of the Brighton School, says: "As far as I have been able to ascertain, about seven per cent. of the congenitally deaf children are the offspring of cousins."

Dr. George Wallington Grabham, Asylum for Idiots, Earleswood, says: "Consanguinity of parents accounts (partially only) for about six per cent. of the cases which have been admitted into the asylum during the last six years and a half. In 11 cases only out of 543, the parents were first-cousins, and no other cause could be obtained. Where hereditary predisposition coexists with marriage of consanguinity, we frequently find, as might be expected, more than one child affected. We may, therefore, regard with less disfavor marriages between cousins where there is no hereditary taint on either side."

Dr. Rayner, of the Hanwell Lunatic Asylum, reports 3 out of 255 as the offspring of cousins; Dr. Byewater Ward, of the Warneford, Oxford, Lunatic Asylum, none out of 20; Dr. Adam, Metropolitan District, Caterham, lunatics, 20 out of 560; Dr. Yellowless, Glamorgan County, lunatics, 9 out of 218; Dr. Lawrence, Chester County, lunatics, 3 out of 225; Dr. Mickle, Grove Hall, Bow, 8 out of 181; Dr. Oscar Woods, Hatton, Warwick, 8 out of 258; Dr. Grabham, Earleswood, Surrey, idiots, 53 out of 1,388; Dr. Orange, Broadmoore, lunatics, 2 out of 150; Dr. Gilchrist, Crichton Royal Institution, Dumfries, 4 out of 51; Dr. Anderson, Southern Counties, Dumfries, 8 out of 200; Dr. McIntosh, Perth District, Murthly, 3 out of 78; Mr. W. H. Warwick, Asylum for the Deaf and Dumb, Kent, 52 out of 632.

Dr. Arthur Mitchell, of Edinburgh, Department Commissioner of Lunacy in Scotland, has made a most thorough investigation of the subject in his paper, "Blood Relation in Marriage." (He found among 146 born from 45 consanguineous marriages, 37 of them being fertile, 5.5 per cent. idiots, 3.4 per cent. imbecile, 7.5 per cent. insane, 1.4 per cent. epileptic, 3 per cent. paralytic, 1.4 deaf-

mutes, 2 per cent. blind, 15 per cent. consumptive, scrofulous, or manifestly weak in constitution.) He arrives at the following conclusion: Under favorable conditions of life the apparent ill-effects were frequently almost *nil;* while if the children are underfed, badly housed and clothed, the evil might become very marked. He thinks the danger greater between uterine relatives than those having a common father, but different mothers, for two reasons: one because more good or evil is inherited from the mother; the other because, while we are always the sons of our mothers; yet we may not be the sons of our fathers.

Sir W. Wilde, in his appendix to "Aural Surgery," considers consanguinity of parents as a paramount cause of ear troubles in children.

Mayr found the following proportions of deaf and dumb, out of 10.000 persons, in various countries: in the Netherlands, 6.72; among Netherland Jews, 15.34; in Germany, 19.32; among Bavarian Jews, 36.47; in Baden, 24.24; in Prussia, 12.44.

Reich found deaf and dumb, out of 10,000 persons, as follows: Argentine Republic, 75.74; United States of North America, 8.39; British Australia, 5.65.

He lays this to the fact that in the Argentine Republic the people are enervated and passive. In both other lands they are very active.

In Sweden consanguineous marriages are not more numerous than in North America, yet, from the abuse of alcohol and other habits detrimental to the general system, the frequency of the deaf and dumb is 20.57 to 10,000 inhabitants. Falk also considers the social condition one of the weightiest tendencies to deafness and dumbness.

Boudin and others claim that the greater frequency of mental diseases among earls and the aristocracy is due to consanguineous marriages. It is probable that this is not so much more frequent among them than among other people, but is more noticed. Then, too, why not lay it to debauchery, extravagance, and corruption?

Dr. Charles F. Withington, of Roxbury, Mass., read a paper before the Massachusetts Medical Society in 1885, in which he gave a collection of 108 consanguineous marriages; 103 were fertile, bearing 413 children. Excluding all those having defects of the slightest nature, 312 remained, being 75.5 per cent. This is as high a per centage, certainly, as can be found in any equal number of children taken at random. The defects present could not be ascribed positively to the consanguinity of the parents. They consisted of: Deaf-mutes, 12; insane, 7; idiots, 13; blind, 8; died of consumption, 15; nervous, 5; of less than average intelligence, 8; died in infancy, 16; not robust, 6; hermaphrodite, 1; died of meningitis, 2; cross-eyed, 2; still-born, 2; deaf (not congenital), 2; stammerers, 2; myopic, 2; deformed, 2; epileptic, 1; total, 101.

Of these 108 marriages fertility was present in all save 5. In one of these there was a mechanical impediment on the part of the wife; in another the marriage had lasted only two years. Three of these were physicians, and one a member of the Boston Tea Party, certainly very respectable members of society.

The marriage of Jones and Jones, Brown and Brown, Smith and Smith, probably means the marriage of distant relatives, though the parties themselves are not aware of it.

Dr. Bemis reported to the American Medical Association a collection of 843 consanguineous marriages, producing 3,942 children, 4.6 births per marriage; 28.7 per cent. are put down as defective; 3.6 per cent. as deaf-mutes; 2.1 per cent. as blind; 7 per cent. as idiots; 2.04 per cent. as insane; 1.5 per cent. as epileptic; 7.6 per cent. as scrofulous, and 2.4 per cent. as deformed; 22.4 per cent. are recorded as having died young.

M. Burgeois gives the history of his own family, descended from a consanguineous union in the seventeenth century. Sixty-eight marriages all feel the effects of consanguinity, yet only one was infertile, and this the fault of the wife, a woman of alien stock. The health of all the 200 descendants is excellent, except in one family, where scrofula has crept in.

Seguin gives the particulars of 10 marriages of kin in his own family, two of the number being uncle with niece, and the rest of first-cousins. Sixty-one children were born, not one of whom showed deaf-mutism, hydrocephalus, stammering, or polydactylism. All lived to be grown up.

Dally gives a case of intermarriage between two families, all being first-cousins save two, who were second-cousins. This has continued for five generations, with an average of three or four children per marriage. There has been no case of idiocy or deaf-mutism, and but one of insanity, in an old woman.

M. Voisan reports observations, in the isolated commune of Batz, of 46 consanguineous marriages. These gave 172 children. Sterility occurred in two instances. Mental disorders, idiocy, deaf-mutism, hemeralopia, albinoism, retinitis pigmentosa, or malformations were all unknown. The community consisted of 3,300 souls. They were simple, intelligent, and moral, and had intermarried from time immemorial.

Dr. Cameron makes the statement, based upon the Irish census of 1881, that of the 5,136 deaf-mutes enumerated in the country, 135, or 2.6 per cent. were the children of first-cousins.

Dr. Derby, in a total of 12,130 cases in his ophthalmic practice, has met 23 cases of retinitis pigmentosa. Ten of these were the children of cousins. In none of the 23 cases were any other abnormalities noted. Dr. Derby also gives figures by other observers, which, together with his own just referred to, amount to 210 cases. In 70 there was relationship, in 139 no relationship, in 1 no information.

Dr. Standish, in the Carney Hospital, Boston, in a total of 3,726 patients, found 3 cases of retinitis pigmentosa. In 1 there was no record as to consanguinity, in 1 no relationship, in 1 the parents were first-cousins.

Liebreich found retinitis pigmentosa and deaf-mutism closely connected. From investigations with the ophthalmoscope among the inhabitants of Berlin, he found deaf-mutism among Catholics, who prohibit consanguineous marriages, 1 in 3,000; among Protestants, who permit, 1 in 2,000; among the Jews, who encourage, 1 in 400. According to Liebreich and data from Moorfields Hospital, the development of retinitis pigmentosa is favored by consanguineous marriages.

It will be seen that the testimony is British. Your essayist wrote to a number of British and American gentlemen connected with public institutions, asking for information. The British answered, but the Americans did not. The latter probably did not have the information, or were too busy looking after their political fences to impart it. Your essayist is under many obligations to the gentlemen from England, Scotland, and Ireland.

Conclusions.—1. Like breeds like, good or bad, entirely independent of consanguinity.

2. Evil results have undoubtedly followed consanguineous marriages, but whether dependent upon consanguinity is extremely doubtful.

3. Intemperance, luxury, dissipation, sloth, and shiftlessness, as well as hygienic surroundings and innumerable other causes, among them the depraved moral state dependent on births the result of incest, should bear much of the responsibility laid at the door of consanguinity.

4. Testimony is often weakened by religious or other prejudices.

5. Data are of doubtful reliability, full of flaws and false reasoning. The noted cases are the unfortunate ones. The favorable are unknown or forgotten. It is the ill news which travels fast and far.

6. We as physicians know that there is much more illicit intercourse than is generally discovered. May not

many people be related though not aware of it. Many marriages may thus occur between relatives presumed to be non-relatives, thus again vitiating statistics.

7. Statistics show about the same proportion of deaf-mutes, idiots, and insane persons, descendent from consanguineous marriages, to the whole number of those unfortunates, as the number of consanguineous marriages is to the whole number of marriages. They show fertility among the consanguineous to be slightly greater than among non-consanguineous. They also show a somewhat greater frequency of retinitis pigmentosa.

8. Atavism explains fully the fact that in some instances healthy consanguineous parents beget unhealthy children. This, as is well known, occurs in most hereditary troubles. Furthermore, a less superficial examination may show this healthfulness to be only apparent.

9. Evil results in the offspring of consanguineous marriages prove that *something* was wrong. That it was the consanguinity has not been proven. It may have been one of a hundred things, and dependent on all of the antecedents for generations. Such results remaining absent after these marriages prove, for that case at least, that consanguinity was harmless, for it was known to be present. Further, if consanguinity was the cause, the effect should follow where the cause is present.

10. Consanguineous marriages which bring together persons having a disease or morbid tendency in common are dangerous to the offspring. Not, however, one whit more so than the marriage of any other two persons not related, yet having an equal amount of tendency to disease in common. Conditions present in both parents, good or bad, are simply augmented, and the result would have been the same were they not related.

11. Given, a malformation or disease firmly established, we have a tendency to breed true. Given, a defect or peculiarity in a family, race, or sect, this will naturally be propagated by intermarriage, *e.g.*, color-blindness is remarkably hereditary among the Jews and Quakers. The Quakers are educated to abhor color. Those who admire color separate themselves from the sect and thus intensify the tendency in the remainder. The defect has probably crept among the Jews, and is kept up and intensified by intermarriage. The same means has also had its effect among the Quakers.

12. Certain inherited diseases—as scrofula, phthisis, and rachitis—which are ascribed to consanguineous marriages, probably in every instance, could be traced back to an ancestor.

13. Man is an animal, anatomically, physiologically, and sexually. He is subject to the same laws of propagation. In-and-in breeding in animals is carried on to an extent not only not permissible in the human species, on moral grounds, but also beyond the bounds of human possibility. Yet this is done by cunning breeders to improve the stock and put money into their pockets. The Jersey cattle have been bred for the last hundred and fifty years on a small island, six by eleven miles. You would not raise them for beef or oxen, yet they command a high price for their milk and butter. This was probably the recommendation of the first cattle on the island, and this quality has improved from that time to this through in-and-in-breeding.

14. It would be better for the offspring were consanguineous marriages under medical supervision. Certainly no better than for all marriages to be under like supervision.

15. The half a hundred abnormalities ascribed to consanguinity, including almost all the ills that flesh is heir to—among others, whooping-cough—approaches the ludicrous.

16. The factors which lead to consanguineous marriages are, portions of country geographically isolated or mountainous, rendering communication with the outside world difficult; religious or political sects of an exclusive nature, and aristocratic ideas. As examples, note the percentage of consanguineous marriages in Scotland, 5.25 per cent., to those in England, 3 per cent.; the preponderance in Martha's Vineyard, the commune of Batz, and among the Jews and Quakers.

17. The facts do not warrant us in supposing that there is a specific degenerative effect caused *ipso facto* by consanguinity.

18. Consanguineous marriages, no other objection being present, should not be opposed on physiological grounds.

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A New Solvent of Urinary Calculi.—At a recent meeting of the Therapeutical Society, M. Limousin showed a specimen of pichü, or piché. It was a solanum to which the Chilians gave that name. It had recently been introduced into France. In its native country it was believed to disintegrate urinary calculi. M. Limousin prepared a fluid-extract of pichü, of which four dessertspoonfuls represented thirty grammes of the plant, the dose generally administered in twenty-four hours. M. Limousin believed that piché acted especially on the mucin, which held together the different elements of calculi, and dissolved it, and lessened vesical catarrh. In consequence of the resin it contained, M. Dujardin-Beaumetz confirmed this statement.

GENERAL PSORIASIS AND PSORIASIS PALMARIS ET PLANTARIS IN A CHILD.

By GEORGE T. ELLIOT, M.D.,

ATTENDING DERMATOLOGIST DEMILT DISPENSARY, ASSISTANT VISITING PHYSICIAN NEW YORK SKIN AND CANCER HOSPITAL, ETC.

The development of psoriasis usually occurs about the age of puberty, or later in adult life, but only in rare instances does it make its appearance in childhood. Dühring mentions a case, seen by Stellwagon, which occurred in a child under five years of age as exceptional, but Kaposi states that he has seen the affection in infants. Without doubt these very early cases present themselves occasionally to every one in large dermatological practice, but they are always viewed with interest as being exceptions to the rule.

That any fundamental reason for this exists does not seem patent to us, since we do not know the cause or causes which produce psoriasis, but as yet are only able to consider the changes in the skin after the disease has developed itself. The changes observed in psoriasis are situated especially in the rete Malpighii, it is true; but whether these changes are primary (Thin, Jamieson, Robinson) or secondary to papillary outgrowth (Vidal, Leloir, Kaposi, etc.), or due to the presence of a parasite (Lang, Wolff, Eslund), or to an inherited weakness of that nervous centre which regulates the nutrition of the skin (Weyl), is as yet entirely undetermined, and even the indisputable proving of either one of the two former views would help in no way in deciding the cause of the affection. The presence of the disease is the only factor of which there is no doubt; but we cannot explain why the affection should appear at times in infants and children, and at others at the age of puberty, and again only after adult life has been reached.

The manifestations of the affection are at all ages similar. With the exception of the palms of the hands and the soles of the feet, which are very rarely implicated in the process, the lesions appear indiscriminately upon all parts of the body, preferring, however, the extensor surfaces of the extremities.

In the following case two points of interest are found: the exceptionally early age at which the psoriasis appeared, and its presence upon both the palms of the hands and the soles of the feet. I have not been able to find in the literature of the subject mention of any case in which true psoriasis plantaris et palmaris occurred at so early an age, though, in all probability, such cases may have been observed.

Case.—K. K——, female, eighteen months of age, was first seen by me December 28, 1885. She is well nourished, of good size for her age, apparently healthy, though rather pale, but has not yet begun to walk. Her general functions, such as appetite and bowels, are in a normal condition. As far as is known there have been no diseases of the skin in her family. The father and the mother have not, nor have they had, any skin eruptions whatever, and both of their other two children are entirely well. The mother, who came with the child, states that it was in perfectly good health up to the age of thirteen months. It became at that time very peevish, irritable, and restless, and has remained so up to the present. A few days after the inception of this general condition an eruption, consisting of erythematous papules, appeared upon the forehead. These grew larger, slowly becoming covered with thin, whitish brown, easily removable squamæ. The actions of the baby in continually scratching the forehead showed that the lesions were itchy. Succeeding this outbreak similar erythematous papules appeared upon the upper and lower extremities, which in turn were covered with squamæ. No lesions appeared upon the body at all.

Status præsens.—On examining the little patient a diffuse patch was observed upon the forehead extending almost to the eyebrows. Posteriorly it was continued over the vertex as far back as the occiput. The squamæ covering it were easily detached, and from admixture of sebum were slightly fatty. Over the parietal bones were discrete lesions, varying in size from a pea to a nickel, and of typical appearance. Here and there on the face were also a few characteristic lesions. The trunk was absolutely free. On the forearms, about halfway up to the elbows, there were a number of psoriasis lesions varying in size from a pinhead to an ordinary pea.

On the thighs the eruption began at Poupart's ligament, and more or less closely aggregated extended to the knee. On the legs and feet the lesions were quite numerous, and in some places were plaques as large as a twenty-five cent piece. On the labia majora also there were a sew spots.

On the palms of the hands four or five small lesions were found. They were about as large as a pea, rosy in color, uninfiltrated, not elevated, and without squamæ. Near the wrist were a few more lesions. On the soles of the feet, both in the arch and anteriorly near the toes, were a number of similar papules. There were seven or eight on each sole, which presented the same characteristics as those on the palms of the hands. The mother stated that these lesions had been present only for a week or ten days.

The baby had been under treatment for a month previously, but the mother said that the eruption had not changed whatever. I gave her minute doses of arsenic in cod-liver oil, and externally applied a three per cent. ointment of hydrargyrum ammoniatum. At the same time good nourishment and frequent baths were ordered.

January 4, 1886.—The eruption had almost completely disappeared from the forehead and head, and had greatly improved upon the rest of the body. She seemed better in every way, less irritable and stronger. Bowels and appetite were in good order.

January 11th.—Only a few of the lesions were remaining. The skin where the lesions had been presented no appearance of redness, but was slightly rough, and slight pigmentation was seen here and there. The spots on the palms and soles were in *statu quo*.

January 20th.—Only two of the lesions have not disappeared. The pigmentation is also less. The palmar and plantar spots are very faint, but still distinguishable.

February 10th.—The baby presents no lesions whatever. The palms and soles are also free beyond a slight rosiness remaining where some of the lesions had been. The general condition of the little patient is greatly improved. She is stronger and is beginning to walk. The same treatment was kept up for a week longer. Since then she has continued getting stronger and better, and has remained free from lesions.

As already pointed out, the age at which the psoriasis appeared in this patient is an exceptionally early one; but aside from this, the presence of the affection upon the palms and soles is important. Not only at an early age, but at every age, the presence of true psoriasis lesions upon these portions of the body is comparatively rare. In fact, so much is this the case that papular lesions, presenting the characteristics associated with psoriasis palmaris et plantaris, if found on these places, are almost invariably set down as being due to syphilis. Some even hold that true psoriasis never appears upon the palms and soles, but if these parts are affected it is unquestionably owing to syphilis. The papular syphilide has a predilection for these portions of the body, it is true, and the condition which has been called psoriasis palmaris et plantaris is seen very commonly in both the early and late stages of this disease; but yet this does not exclude the possibility of non-syphilitic psoriasis occurring there. How often this latter does occur in a given number of cases it is difficult to say. In the last six months I have seen three patients in whom the disease was present at the time of consultation, and one with well-marked general psoriasis, who stated that the affection showed itself first of all on the soles of the feet.

When I saw him, however, these surfaces were entirely free from lesions.

The presence of true psoriasis upon the palms and soles should not offer any particular difficulty in diagnosis It can be confounded with the early papular syphilide possibly, but that only rarely, since it is very exceptional for psoriasis to be situated on those surfaces alone, but in the same manner as the syphilide it always shows itself more or less distributed over the whole body. Neumann is the only one, I think, who has reported a case in which the true psoriasis was limited to the palms alone, the rest of the body becoming affected only several years later. But it is unfortunate that when psoriasis is present on the palms and soles, many will disregard the lesions present on the body, or consider them as a squamous syphilide, and immediately diagnose syphilis. This was very forcibly brought to my notice last winter by an elderly member of the profession. He had palmar and plantar psoriasis, had been told that it was syphilis, and notwithstandinding the fact that from head to foot he was covered with psoriasis lesions and patches, he had firmly convinced himself that he had syphilis. He had in consequence followed an anti-syphilitic treatment for months, uselessly as might be expected, and was fast becoming hopeless.

It is in such cases that the occurrence of true psoriasis upon the palms and soles must be remembered, and the serious mistake of confounding together two widely different processes be carefully avoided. It is possibly difficult to make a correct diagnosis from the lesions themselves; but yet, in each affection, there are characteristics which, when recognized and given proper weight, go far in leading the practitioner to the proper conclusion. We find that the lesions in true psoriasis appear symmetrically upon both palms or both soles, but in syphilis it very commonly happens that only one palm or sole is affected. Psoriasis appears under the form of erythematous uninfiltrated papules, which offer no subjective symptoms beyond slight itching. In syphilis the papules are of a dark brownish red, presenting a distinct circumscribed infiltration, which is often painful to pressure. In both affections the lesions are only slightly if at at all elevated above the level of the skin.

In psoriasis the papule exists only a short time before squamæ form over it. This does not occur as rapidly as when the lesions are present on the body, owing to the thickness of the epidermis on the palms and soles. The squamæ are rather thick at first, though later offering the same characteristics as do the scales of psoriasis on other portions of the skin, are detachable with ease, and the surface underneath is found to be only slightly infiltrated and bright red in color. The papules may coalesce together, occupying the whole or only part of a palm or sole. In a patient with psoriasis of the palms, who came under my treatment a few weeks ago, the entire palm was implicated, while on the flexor surfaces of the fingers were other lesions, some as large as a nickel, some smaller. In all stages of the papules, from the time that squamæ are first observed, the epidermis scales cover the entire surface implicated, not a portion of it alone, and as long as the affection is present, the renewal of these scales or lamellæ is continuous over this entire surface. The peculiar punctate hemorrhage, seen after removing the scales from a lesion of psoriasis on the body, I have not been able to observe when the disease was present on the palms or soles, nor have I seen a psoriasis annularis or gyrata on these surfaces. Yet even should these latter forms be observed, their characteristics *in toto* would be the same as those already mentioned. Greater care, however, would be called for in giving each symptom its proper weight, owing to the increased possibility of confounding these forms of psoriasis with the late palmar syphilide. Lastly, psoriasis on the palms, like psoriasis on the body, also tends to disappear and to return of its own accord.

In syphilis the papules usually remain intact for three or four weeks, and then desquamation begins. The upper layer of the epidermis, situated over the infiltration, is cast off; a continuous formation of squamæ occurring only at the periphery. At this stage the lesions appear as small scaly rings enclosing a dark brownish-red infiltration covered by a layer of thin epidermis. The lesion may remain presenting this appearance for a variable length of time, and then if treated entirely disappear, or, the infiltration on the centre being absorbed, the scaly rings grow larger peripherally. The formation and renewal of the squamæ are not only different from these same processes in psoriasis, but the scales themselves differ materially in the two affections. Instead of the white, silvery, loosely adherent scales covering the entire lesion, as is seen in psoriasis, we find in the early palmar syphilide small yellowish-white adherent scales, which require some force to remove them, and which are situated around the periphery of the infiltration.

The specific psoriasis palmaris et plantaris does not, however, always appear in the form just described, but at times occurs as very small, sensitive infiltrations, covered with thickened epidermis, which after a longer or shorter time either fall out or can be peeled out like a clavus;[1] or again, under the form of a superficial diffuse infiltration of a brownish-red color, distinctly demarcated and covered by a parchment-like slightly desquamating epidermis. Differentiation between psoriasis and the palmar syphilide which appears in the late stages of syphilis offers no particular difficulty. In this latter the lesions appear in groups or segments of circles. They may become confluent, and then appear as a dense, diffuse infiltration of the skin, covered with thin adherent scales, and bounded by arched borders made up of separate papules; or the lesions may progress peripherally, with consecutive involution, producing the form to which has been given the name serpiginous, one so commonly seen in late syphilis. Fissures are often present, owing to the fact that the dense and deep infiltration yields only with difficulty to the movements of the hands. These, the main characteristics of the palmar and plantar lesions in both psoriasis and syphilis, are thus seen to offer peculiarities which would seem decided enough to exclude errors in diagnosis, and, in fact, if proper signification is given to other lesions which may be present it would be impossible. The differences between them are no less marked when each is treated. Psoriasis of the palms disappears as readily and as rapidly under treatment as psoriasis on other portions of the body, while the persistence and rebelliousness of syphilis on those surfaces is of daily observation.

In the history of the little patient given in this article it was mentioned that there were not any squamæ upon the lesions of the palms and soles. The papules had been present about a week or ten days, and though desquamation was absent yet other characteristic symptoms were not. Even had a doubt existed as to their nature it would have been immediately removed on seeing the typical lesions present on the other portions of the body. Their disappearance under treatment was *pari passu* with those on the extremities, and no factor existed which could have suggested syphilis instead of psoriasis.

23 East Thirty-first Street.

Carbolic Acid and Chloral.—When carbolic acid and chloral hydrate are mixed together, provided the proportion of carbolic acid does not exceed 1.7 to 1 of chloral, a liquid is formed, as when chloral is triturated with camphor. This liquid is perfectly soluble in water. If more than the above proportion of carbolic acid be present, corresponding to three molecules of carbolic acid to one of chloral, the excess will separate on the addition of water. The substances separate in any case on the addition of heat.

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[1] Finger: Die Syphilis, etc. Vienna, 1886.

Clinical Department.

TREATMENT OF ASPHYXIA OF THE NEWBORN.

Dr. L. N. Sharp, of Minneapolis, Minn., writes that the perusal of an abstract with the above title in a recent number of The Record, has led him to describe a method accidentally discovered many years ago by himself. He was trying to resuscitate an asphyxiated newborn child, but did not succeed, and the pulsation ceased in the cord. "I cut the cord and continued Marshall Hall's method till I became convinced the child was dead. So many years have now passed that I cannot speak of the condition of the heart, but am under the impression I continued my efforts till the beat of the heart could not be heard. Then I asked for a cloth in which to wrap the body, and took the child in my hands, holding the feet in an elevated position with my right hand, while the back and shoulders of the child, in a depending position, lay upon my left hand. The nurse was tardy in bringing me the cloth, and while I was holding the babe it gasped. I laid it down on the bed and again commenced Marshall Hall's method for resuscitation, but no results; I became convinced again that the child was dead. Taking it in my hands again in the manner above described, I asked for a cloth, and as before had to wait a little, and while waiting the child gasped. The thought came to me at once that the child gasped because the force of gravity carried the blood to the brain, and the lack of this was why the child was dying. I held the child in the same position till gasp after gasp brought respiration and circulation to a normal condition. The child lived. And many, many times since have I resuscitated children which I think would not have lived had I used the ordinary methods."

COCAINE IN LAVAGE OF THE STOMACH.

Dr. Charles N. Dixon Jones, of Brooklyn, writes: "Gastric lavage is rapidly becoming our most reliable treatment in chronic dyspepsia and gastritis. In order to avoid some of the disagreeable features attending this operation, I have resorted to the following expedient: About fifteen minutes before commencing the operation the patient is allowed to hold in his mouth a piece of absorbent cotton saturated with a four per cent. solution of hydrochlorate of cocaine; in a few minutes the palate and fauces are painted with the same solution. The stomach-tube is lubricated with a mixture of olive-oil, oil of wintergreen, and cocaine, after which it may be introduced and the stomach irrigated without that disagreeable vomiting of the tube, and efforts at gagging, which frequently attend the operation. I have adopted this method in some of the most trying and difficult cases, and always with the most happy result."

LARGE DOSES OF IODIDES AND BROMIDES IN MENINGITIS.

Dr. J. F. Stevens, of Shabbona, Ill., reports a case of meningitis occurring in an infant eight months of age. The disease when the child was first seen had so far advanced that parallelism of the eyes was lost, strabismus ensuing. The little patient was evidently failing rapidly, was unconscious, with head retracted somewhat. This condition had come on slowly. There had been no convulsions or convulsive movements. The bowels were extremely constipated, with the abdomen somewhat retracted. The respiration was irregular, and pulse somewhat quickened. A powder containing five grains of calomel was given, and was followed in one hour by a full dose of castor-oil. Blisters were placed behind the ears and mustard to the feet, taking care to cover the soles thoroughly, and an ice-bag was placed at the head. In about one hour the patient aroused somewhat, and in an hour and a half, by which time the bowels moved, cried out several times.

℞. Sodii brom..... ʒ ss.
Aquæ,
Syr. simplex .....āā q.s. ad ʒ iij.
Sig.—One full teaspoonful every hour.

Ten grains of bromide of sodium were given every hour, and one-half grain of iodide of potassium was given every second hour. At the end of twenty-four hours the latter was given only once in three hours. The bromide of sodium was given in doses of gr. x. every hour, continuously, for four days. Under this treatment the condition of the patient slowly improved, but any attempt at reduction of the dose was sure to be followed by bad symptoms.

At the end of four days the bromide was given once in two hours; from this to once in four hours, and then three times a day. The iodide was persisted in until symptoms of iodism manifested themselves, when the medicine was gradually withdrawn. During all this time the ice-cap, filled now with simply cold water, was used. The bowels were kept open with the oil.

Some fourteen days after the case was first seen small abscesses appeared on the scalp, which would discharge about a teaspoonful of pus when opened. These continued until ten were formed. On the eighteenth day the treatment was changed, citrate of iron and ammonium in cod-liver oil three times a day. Small doses of brandy were also given from time to time. The patient is now steadily improving, and bids fair to recover. Both ears have discharged fetid pus freely.

There was no history of syphilitic trouble in the parents, though there had been tuberculosis in a preceding generation.

PERMANGANATE OF POTASSIUM IN AMENORRHŒA.

Dr. F. Tipton, of Selma, Ala., reports a case of amenorrhœa of twelve months' standing, in which all the most reliable emmenagogues, including the faradic current, had been tried without result. The menses reappeared after one week's treatment with the tablets of permanganate of potassium, in doses of two grains, given three times daily, for seven days previous to the expected period.

HYOSCYAMINE IN DELIRIUM TREMENS.

Dr. F. Tipton, of Selma, Ala., has had most satisfactory results with Merck's hyoscyamine, in doses of $\frac{1}{75}$ grain hypodermatically administered, in the treatment of all the distressing symptoms of delirium tremens. He writes: "It has never yet failed me, nor have I experienced any bad results from this drug in these doses. I treat all cases of delirium tremens with this drug as soon as chloral and the bromides fail, and they all get well rapidly. I use the following formula, which I obtained from Dr. P. Bryce, of the Alabama State Insane Asylum: ℞. Hyosciamin, Merck's, gr. j.; alcoholis, ʒ j.; aquæ, ʒ j. M. Sig.—Inject from five to ten minims for one injection."

Centenarians.—The reports which appear from time to time of individuals who have lived to round out a century of existence have frequently been doubted by vital statisticians. In order to settle the question, Professor Humphrey, of England, is now engaged in collecting and sifting these reports, and promises soon to publish those whose authenticity is undoubted.

Progress of Medical Science.

THE DIFFERENTIAL DIAGNOSIS BETWEEN FIBROMYOMATA OF THE UTERUS AND DISTENTION OF THE FALLOPIAN TUBES.—Dr. P. Horrocks, in an article in the *British Medical Journal* of May 1, 1886, thus summarizes the points of difference between these two affections: 1. Fibromyomata are usually accompanied by menorrhagia, and distentions of the tube are not. 2. Fibromyomata, especially when intramural, cause uterine enlargement; while in distention of the fallopian tube the uterus is not enlarged, or only slightly, unless complicated by some other condition. 3. Fibromyomata are usually painless, except that there is often dysmenorrhœa, and, if large, a bearing-down pain, or sense of weight; while in distention of the tube the pain is constant throughout the intermenstrual period, aching in character, and aggravated by the menstrual period. 4. Nutrition is not much affected in fibromyomata, while it is in distention of the tube, especially when the distention is caused by pus; hence, wasting or loss of flesh is a valuable distinction. 5. The temperature is normal in fibromyomata, raised more or less according to nature and amount in distentions of the tube. 6. Fibromyomata, when intramural, move much more rigidly with the uterus than distentions of the fallopian tube. 7. Fibromyomata are much less painful, on pressure, than distentions of the tube. 8. Fibromyomata are usually much firmer in consistence than distentions of the tube. 9. Intermenstrual discharges, usually yellow, are much commoner in distention of the fallopian tube than in fibromyomata. 10. The position and direction of the uterine cavity is much more affected by fibromyomata than by distention of the tube. 11. Fibromyomata are usually more or less spherical, distentions of the fallopian tube cylindrical. 12. Aspiration yields serum or pus in hydrosalpinx or pyosalpinx, and blood in fibromyomata and hæmatosalpinx. 13. Distentions of the fallopian tube are accompanied by pelvic inflammation much more frequently than fibromyomata.

WARM ETHER AS AN ANÆSTHETIC.—Dr. M. W. Hobbs writes in the Cincinnati *Lancet-Clinic* of May 8, 1886, concerning the advantage of warming ether previous to its administration in the production of anæsthesia. He uses a special form of inhaler, in which the ether is warmed by being placed in a chamber surrounded by hot water, and the vapor is mixed with a certain proportion of air before being inhaled. He finds that anæsthesia is produced more rapidly and with the expenditure of less ether, than when the agent is used cold. He and Dr. Taylor have tried the method in upward of thirty cases, and he writes that the patients not only came under the influence of the drug more readily, but they also recovered more rapidly and pleasantly from the anæsthesia than patients generally do who have been brought under its influence in the ordinary way of administering ether cold.

A CLINICAL PICTURE OF RACHITIS.—In an article on this subject, Heubner writes that it is as yet uncertain whether the disease has a premonitory stage. In many cases three classes of symptoms are observed to precede the appearance of the osseous changes: 1. There are certain functional troubles, such as inability to walk, or convulsions, which are the first signs indicating the existence of any morbid process. 2. Chronic digestive troubles or a chronic catarrh of the respiratory passages, following acute infectious diseases, or accompanying chronic infectious maladies, such as tuberculosis. 3. Restlessness, insomnia without appreciable cause, a marked tendency to sweating by night and day, peevishness, and nutritive disturbances, manifested by emaciation and by frequently recurring diarrhœa. These symptoms may present themselves weeks before the apparition of the osseous changes, or they may appear at the same time with the typical rachitic bone lesions, or they may fail altogether. In young children the first change in the osseous system may be sought for in the cranium, the maxilla, the anterior wall of the thorax, and the lower portion of the spinal column. The parts lying in proximity to the two fontanelles and, in general, the parts most recently ossified, are portions of the cranium which are prone to be first attacked. In these regions, soft spots can be felt in the bones, while in those parts which have been longer ossified there is a little hyperplasia and thickening. The first appreciable change is a general pallor, interrupted, on the cheeks, by a faint red tinge. The skin is soft and delicate, and the muscular tissue is modified as regards its volume and firmness. The head loses its rounded form, the occiput is flattened, and there is a depression in the region of the greater fontanelle. The eyebrows are abnormally elevated, and the physiognomy presents an expression of suffering. The thorax projects forward (pigeon breast), the vertebral column is curved posteriorly or laterally, the belly is abnormally large, and the pelvis is flattened; the development of the extremities is arrested, the bones are considerably thickened at the epiphyseal junction, and, in some cases, bent and twisted. The teeth appear late and may be imperfect in their structure; while the vegetative and animal functions of the economy are nearly equal, the intellectual functions may be well developed. In general, the child becomes weak, peevish, apathetic, and apparently suffering all the time. It suffers also from chronic dyspepsia, indigestion, and constipation alternating with diarrhœa. There is also a tendency to catarrhal troubles of the bronchial tubes. The blood participates in the morbid process, as is evidenced by anæmia; there is swelling of the spleen and of the lymphatic glands, and convulsions are frequently observed. The disease is not a local one, limited to one system, but general, involving the entire economy. The older the children the less grave will the disease be, as a rule.—*Journal de Médecine de Bruxelles*, May, 1886.

CONGENITAL SUPRA-UMBILICAL FISSURE.—Dr. Gibert describes, in *La Normandie Médicale* of May 15, 1886, a peculiar condition which he has observed many times, and of which he relates four cases occurring in individuals from the age of three years up to adult life. From a study of these cases he formulates the following conclusions: There is sometimes found in children from the age of three years, and perhaps earlier, a sort of minute eventration, an intermuscular fissure in the linea alba above the umbilicus, forming a buttonhole, which is the cause of a series of accidents which may be briefly stated as follows: Pain in the epigastric region, not constant, which may be very acute, causing the child to utter sharp cries. When the pain is very severe it causes vomiting, usually merely of food. In order to ease the pain the child flexes its body, refusing to straighten up, and sometimes even presses with its two hands on the abdomen, thus indicating very plainly the seat of the pain. The general health is not impaired, and sleep is sound. The symptoms occur only during the day-time, usually while the child is at play. Examination shows the absence of any umbilical or supra-umbilical hernia, and the existence of a supra-umbilical buttonhole or fissure. The writer states that he has never found a loop of intestine engaged in this slit, though such an accident is theoretically possible. As to the mode of formation of this fissure, M. Gibert does not express any decided opinion, though he inclines to the belief that it is due to a congenital absence of fibrous union between the recti abdominales in this situation. The umbilicus is not actually closed until several months after birth, at which period it is occluded at its upper part by a fibrous bundle, containing, as Richet believes, some elastic fibres. It is possible that the continuous crying of the infant during the first weeks or months of life, may weaken this fasciculus at its upper part, and thus open in some way the linea alba between the recti muscles.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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SUPPRESSION OF PAIN IN LABOR BY THE LOCAL APPLICATION OF COCAINE.

AN American surgeon, Dr. William M. Polk, was the first to make any report regarding the use of cocaine in operations upon the female genital organs. We believe also that an American obstetrician first reported upon the use of cocaine in labor.

This is denied, however, by Dr. M. S. Jeannel, who in an article entitled "The Suppression of Pain in Labor by Local Applications of Cocaine," claims that the idea is essentially French, and was first carried out by MM. Doléris and Dubois. These gentleman, on January 17, 1885, announced that they had applied cocaine locally in eight cases of labor, and in six of them had observed great relief. In September, 1885, Dr. George H. A. Dabbs related his experiences, which were of a similar character, and affirmed that, thanks to cocaine, women could bear children nowadays with very little pain.

Dr. Jeannel (*loc. cit.*) records his observations made during the past year in La Maternité de l'Hôtel Dieu, Saint Eloi. He first applied the cocaine in the form of an ointment with vaseline. He got no results, partly because the vaseline is not absorbed, but mainly, as he believes, because corrosive sublimate injections were made, which drug decomposes the cocaine—a fact worthy to be borne in mind. Aqueous solutions were then employed, and it was found that a five per cent. solution was sufficiently strong. In the first stage of labor a speculum was used, and the solution painted over the neck and vagina, or a tampon, saturated with the solution, may be introduced. In the second stage the tampon is introduced directly, without the aid of the speculum, and the liquid should also be carefully applied over the vulva. The operation must be repeated several times.

The pains of labor are due to the following causes, according to Professor Doléris:

First, the muscular contraction of the uterine walls. The pains from this source are usually slight, and cannot be affected by cocaine.

Second, pains are produced by the dilatation of the neck, and of the vaginal walls, the nerves of those parts being pressed upon and torn. These pains are relieved to a remarkable degree in many cases by cocaine.

Third, pains of an acute and severe character result from pressure of the child upon the nerve-trunks of the pelvis. Cocaine is powerless to relieve these.

Fourth, some pain is felt from the stretching of and pressure on the mucous membrane. This is suppressed by cocaine.

Fifth, most atrocious pains are produced in the expulsion of the head by the stretching of the vulva and perineum. These, also, according to Doléris and Jeannel, are relieved by cocaine.

The total result of the analgesic application seems to be that in most cases the patient feels but slight pain in the pelvis, and only complains of a dull pain above the pelvis, and pains in the loins.

It yet remains to determine whether the amount of cocaine used is ever sufficient to cause constitutional effects, or to affect the normal contractions of the uterus.

It appears very certain, so far, that cocaine is not so effective or convenient as chloroform, and its claim for adoption must be based on its greater safety and absence of any bad after-effects.

At present the most satisfactory use for cocaine at the time of labor is probably in cases of lacerated perineum. Here a hypodermatic injection of a few drops allows the immediate and painless suture of the parts.

THE DISSIPATION OF MAMMARY TUMORS BY UTERINE MASSAGE.

UNDER the title of "Hysterical Breast" Dr. Edward P. Fowler (*New York Medical Times*) reports in minute and careful detail three cases of hysterical women suffering from painful tumors in the breast, which disappeared solely, it would appear, as the result of manipulations directed to the womb. He says:

"From the three cases recited in this paper, together with several other confirmatory though less striking experiences, I am convinced that among other maladies connected with the female generative organism there is a class of breast-tumors, formidable in appearance, but which may be entirely controlled and dissipated by uterine manipulations, perhaps we might say uterine massage.

"From such experience as I have I should say that tumors of this kind are characterized by unusual hardness, freedom from attachments, great sensitiveness, especially upon light touch, absence of all other glandular swellings, hysterical temperament, and with more than an ordinary degree of sexual differentiation.

"I think they will generally be found in company with a tenderness in the upper cervical portion of the spine, sensitive ovaries, pressure upon which will give a sense of relief, even though it increases the pain, and with a uterine hyperæsthesia, unassociated with either ulceration or other inflammation.

"It probably would be most often associated also with a profusion of hair, heavy eyebrows, long lashes, and full lips, especially upper lip."

His first case was that of a young unmarried woman who had a tumor in the left breast about the size of a hen's egg. This was very tender, especially when attention was directed to it. The patient had a "never-ending pain" in the ovaries. Pressure upon them produced a sensation partly painful but partly pleasurable and erotic, and the pressure would throw the patient in a deep hypnotic sleep lasting from ten to sixty minutes,

The girl had had hysterical attacks, and some of the relatives were epileptic. A vaginal examination revealed nothing. Several distinguished physicians and surgeons had examined the tumor and advised its removal. Dr. Fowler, after a careful study of the case, decided to make the same recommendation, but delayed doing so until his next visit. To his surprise he was told that his "treatment" had greatly benefited her. Subsequent experience showed that the simple vaginal examination produced a steady improvement in the symptoms, the tumor grew smaller, and finally disappeared. The second and third patients gave histories of much the same character.

They are most instructive, as showing the marked influence of the generative organs over nutrition in such cases. It is well known that fibroid tumors apparently disappear spontaneously at times. In the present cases one can trace a tolerably clear connection between the relief of genital irritation and the disappearance of the new growths.

THE AUTOPSY UPON THE LATE KING OF BAVARIA.

GREAT interest attaches to the question of the alleged madness of the late King Louis of Bavaria. Many have hinted that his eccentricities were purposely exaggerated by those about him, and that he was not in reality insane. A leading English medical journal takes this view.

The full report of the autopsy, which we give below, will therefore be read with close attention. It seems that on June 8th Professor Von Gudden, Dr. Hagen, Professor Grashey, and Dr. Hubrich deposed under oath (1) that King Louis was suffering from a well-advanced form of mental disturbance known to alienists as paranoia (Verrücktheit); (2) that this form of disease was one of gradual, progressive development, and was, in his majesty's case, then incurable; (3) that through this disease the free will of thinking was completely destroyed, and he was permanently incapacitated for governing.

Such was the unanimous opinion of the physicians mentioned.

The post-mortem was made by Professor Rüdinger, in the presence of Professor Grashey, and Drs. Kerschensteiner, Halm, Hubrich, and Rückert. Marked changes of various forms and of a degenerative nature were found in the skull, brain, and meninges. These changes were partly abnormal developments, partly chronic inflammations of old and recent date, and are described as follows:

The scalp was very thick and enormously vascular. The skull was disproportionately small and asymmetrical. For example, the diagonal diameter from the left brow to the right side of the occiput was 17.2 ctm., while from the right brow to the left occiput it was 17.9 ctm. The skull was extraordinarily thin, its thickest portion being only 3 mm. The coronal and sagittal sutures on the inner surface of the skull were completely ossified. The longitudinal sinus was too much dilated posteriorly and narrowed anteriorly. There were several large and small bony protuberances on both sides of the inner surface of the frontal bone.

The dura mater was in general much thickened, especially over the frontal bone, where it was vascular and roughened. The left petrous bone showed a projection which corresponded to a depression in the temporal lobe. The tentorium was irregularly thickened, and on stretching appeared porous and friable.

All the blood-vessels of the base were filled with a dark fluid blood.

The brain, without the dura, weighed 1,349 grms., or about forty-three and a half ounces.

The arachnoid on both convexities of the cerebrum was thickened and milky-looking. At one place, about at the junction of the left first frontal and the ascending frontal, the pia and arachnoid membranes had become thickened and raised by fibrous proliferation. The skull over this point was almost as thin as paper.

In certain localities on both sides the convolutions appeared shrunken, viz., at the beginning of all three of the frontal convolutions, the mesal parts of the anterior central convolutions, and in the region of the middle of the post-central fissure. The brain substance was vascular and soft.

No microscopic examination has yet been made.

The account thus given apparently does reveal degenerative changes. Taken in connection with the personal and family history they place the insanity of the king beyond all reasonable doubt, and make it quite unnecessary to suppose that there was any dark conspiracy in connection with his tragic end.

THE CONTRIBUTORS TO THE MEDICAL RECORD.

DURING the year ending with June, 1886, there were received and published in THE MEDICAL RECORD four hundred and eighty-one communications from its readers and subscribers. A still larger number of articles was received, but for various reasons could not be published. This large number of communications is most gratifying, as showing the scientific activity, powers of observation, and literary diligence of the American physician. For at least four-fifths of these articles were from general practitioners, and represented the fruits of sound studies and of practical experience in the treatment of disease. The contrast between this state of things and that in France and Germany is striking. The number of contributions in the leading medical weeklies of those countries is perhaps one-half less, while the number of contributors is still fewer. Though open to some criticism, it is, on the whole, the better way that medical art should be advanced by the observations and contributions of the many rather than by the laborious studies and closet-work of the few. At least these methods usefully supplement each other. The American notes his results and reports them to THE MEDICAL RECORD or other journal, but the German and Frenchman appear to leave this mostly to their professors and their assistants.

It is naturally agreeable and consoling also to find how widespread is the interest taken in the columns of THE RECORD. We have received and published contributions from every State in the Union except Vermont, Delaware, and Florida.

A very considerable majority of our contributors are from outside the city and State of New York. Ohio, Pennsylvania, Maryland, and Illinois come first in the number of articles sent. But Massachusetts, Indiana, California, Missouri, and Kentucky follow closely after,

Quite a number of esteemed correspondents reside in Alabama, North Carolina, Wisconsin, Minnesota, Michigan, and the robust State of Texas. Thus THE RECORD's columns receive equally solid support from the sunny fields of the South and the rock-bound coasts of New England. Physicians in Oregon, New Mexico, Nebraska, and Arizona, however, send us more than our neighbors in Vermont, New Hampshire and Rhode Island. The United States Army and Navy have furnished most valuable papers, and we yearly have, besides, communications from England, Mexico, Japan, Corea, and Palestine.

Without any desire to indulge in self-praise, we feel nevertheless that it is but right to say that this widespread and gratifying support of our columns is due to the steady and consistent purpose with which THE MEDICAL RECORD has aimed to present whatever appears in medical literature that could possibly interest, instruct, or benefit the general practitioner in his daily work. It has been our aim, also, to promote in every way the moral, social, and educational condition of those practising the high calling of medicine. In pursuing these ends, naturally local and geographical considerations entirely disappear; medicine is cosmopolitan, and of this there can be no better evidence than the columns of THE MEDICAL RECORD, upon whose contributors the sun never sets.

THE TRUE OBJECTS OF MEDICAL SOCIETIES.

DR. FRANCIS DELAFIELD, in his inaugural address at the opening of the Association of American Physicians and Pathologists, stated in a few pregnant sentences the objects of the Association. They told well the story of the objects of the new Society, but they might also be profitably used as a guide for all national and local Associations. He said:

"We all of us know why we are assembled here to-day. It is because we want an Association in which there will be no medical politics, and no medical ethics; an Association in which no one will care who are the officers and who are not; in which we will not ask from what part of the country a man comes, but whether he has done good work and will do more, whether he has something to say worth hearing, and can say it. We want an Association composed of members, each one of whom is able to contribute something real to the common stock of knowledge, and where he who reads such a contribution feels sure of a discriminating audience.

"We are all busy men, working men, ambitious men. We all like to give instruction and to gain reputation, and both of these we can do in the societies already existing. But we also want a society in which we can *learn* something. And this, I take it, is the real object of the enterprise which we inaugurate to-day: to form an Association of Physicians and Pathologists to which we may come year after year with the well-founded hope that at each meeting we will find something to *learn*."

SCARLET FEVER IN THE COW.

DR. JAMES CAMERON has reported the results of observations tending to show that cows may suffer from a peculiar, hitherto undescribed, infectious disease, and that consumers of the milk of these cows may get scarlet fever. His attention was attracted to the subject by an outbreak of scarlet fever which occurred in a certain district in and near London. It was found that the families in which the fever appeared used the milk from a certain dairy, the cows of which were affected by the peculiar disease in question. The disease is not exactly a new one, being known to farmers as "sore teats," "blistered teats," etc., but its nature has not been recognized. In veterinary text-books it is spoken of as "crythema mammillarum." Dr. Cameron believes it to be a specific contagious affection, occurring usually in the first instance among newly-calved cows, and capable of being communicated to healthy cows by direct inoculation of the teats with virus conveyed by the hands of the cowman. The disease may continue from four to six weeks, and is characterized by general constitutional disturbance, a short initiatory fever, a dry, hacking cough, sometimes quickened breathing, sore throat in severe cases, discharges from the nostrils and eyes, an eruption on the skin round the eyes and hind quarters, vesicles on the teats and udder, alteration in the quality of the milk secretion, and well-marked visceral lesions.

As it is admitted, we believe, that scarlet fever may be disseminated by milk, the importance and interest of Dr. Cameron's observations are at once apparent.

Scarlatina has been described by Professor Barlow as affecting the cow, but the clinical description given is more like that of purpura hæmorrhagica.

THE REVENUE MARINE AND NATIONAL QUARANTINE.

THE Executive departments of our Government certainly present some curious anomalies. Among the latest is that of the Treasury Department patrolling the coast with steamers for the purpose of keeping out infectious diseases. The object is a commendable one, but it is very remote from national finance. The Secretary of the Treasury, some weeks ago, issued an order to the officers of the Revenue Marine to the effect that the President had "determined to establish, by means of the vessels of the Revenue Marine, a national patrol of the coast of the United States, so far as it may be practicable under existing law, and consistent with the performance of the other duties confided to that service."

The revenue steamers are directed to "cruise actively," speak all vessels from southern or foreign ports, and if any contagious disease is found, to send the vessel to the outer quarantine of the destined port. The quarantine-officers to be recognized by the service are the medical officers of the Marine Hospital Service and local or State officers.

LAPAROTOMY IN AMERICA.

WHEN *The Lancet* made some incorrect criticisms of American work in connection with laparotomy for abdominal wounds, THE MEDICAL RECORD was the only American medical journal to see and point out the injustice done. For this we have received no thanks from our esteemed but less alert contemporaries; on the contrary, we have been attacked with the whole artillery of literary weapons, from gentle words of sadness and reproach to burning sentences of indignant denunciation.

MEDICAL LIBRARY OF THE ROOSEVELT HOSPITAL

Our sin, we believe, was in not mentioning Dr. Parkes' dogs, thus putting, we are told, a deliberate slight upon the whole West and South.

Our contemporaries, who have been so quick to see our deficiencies, should have read *The Lancet* and corrected it themselves. We made our criticism and did not attempt to give the whole history of laparotomy.

If we had we should have been obliged not only to do justice to Dr. Parkes, but we should have had to speak of Nothnagel's experiments in 1883, showing how a bowel may be strangulated by a mechanical irritation; of the eight or ten successful cases of laparotomy for stab-wounds performed by foreign surgeons; of the perfectly unique case of laparotomy for rupture of the intestine performed by a London surgeon, Mr. Owens; of the laparotomies for septic peritonitis performed, up to a recent date, almost exclusively by foreign surgeons (we speak of surgical not gynecological cases); of Jobert's experiments upon dogs; of the cases of successful laparotomy for pistol-shot wounds done by Kocher, Ramsay, and Legouest, already numbering more than those done in this country.

Perhaps if our critical contemporaries were more familiar with the history of the subject, they would be less inclined to blame us for not turning an editorial note into a historical and bibliographical monograph.

It is perfectly true that laparotomy for wounds of the abdominal viscera was conceived and perfected in America, and that Dr. Parkes' dogs were therein *magna pars*. It is possible that the same idea was conceived abroad, however, and it is certain that already more successful cases of this kind have been reported by European than by American surgeons.

News of the Week.

Remarkable Lesion of the Nerve-centres in Leucocythæmia.—Dr. Byron Bramwell reports (*British Medical Journal*) a typical case of leucocythæmia in which the vessels of the nerve-centres presented remarkable varicosities. He thinks also that he observed micrococci in the substance of the superior cervical ganglia. It is thought that this condition of extraordinary vascular dilatation and extravasation may not be unusual in leucocythæmia, although no cases of the kind have heretofore been put on record.

Lister and Antisepsis.—Sir Joseph Lister is said to be making extensive trials of various non-volatile antiseptics, double chlorides, and double cyanides of mercury chiefly, and with results which appear to be most satisfactory. In addressing his class, after operations, Sir Joseph Lister speaks with all his former confidence as to the healing of wounds under the simpler methods at present employed, which do not now include the troublesome spray or impervious waterproof dressings.

Poisonous Asparagus.—We learn from the *Lyon Medical* that asparagus grown in certain localities becomes impregnated with minute amounts of sulphide of carbon. Persons eating this are affected with violent colic and diarrhœa.

Professional Amenities in Boston.—One year ago a homœopath, Dr. Conrad Wesselhoeft, by invitation, gave his views upon homœopathy to the Boylston Medical Society of the Harvard Medical School. On April 15th last, Dr. V. G. Bowditch, President of the Boylston Medical Society, delivered an address before the Hahnemann Society of the Boston University, on homœopathy as viewed by a member of the Massachusetts Medical Society.

Professor Kaposi succeeds the late lamented Professor Auspitz as editor of the *Archivs für Dermatologie und Syphilis.*

The Rhode Island Medical Society, at its seventy-fifth annual meeting, held at Newport, June 10th, elected the following officers: Dr. Horace G. Miller, President; Dr. Albert Potter and Dr. John W. Mitchell, Vice-Presidents; Dr. George D. Hersey, Recording Secretary; Dr. E. M. Harris, Corresponding Secretary; Dr. Charles H. Leonard, Treasurer. The Trustees of the Fisk Prize Fund awarded two prizes of $200 each, as follows: (1) To Dr. Charles V. Chapin, of Providence, for the best essay on "Methods of Treatment and Practical Results of Malarial Diseases in New England"; (2) to Dr. Hobart Amory Hare, of Philadelphia, for the best essay on "New Methods and Modified Forms of Disease, due to Progress of Modern Civilization in the Last Half Century." Two prizes, of $200 each, were announced for the ensuing year, to be awarded for the best two essays on these subjects: (1) "Antiseptic Midwifery in Hospital, Dispensary, and Private Practice"; (2) "Membranous Enteritis."

A Correction.—Dr. B. A. Watson, of Jersey City, writes: "In the report of the transactions of the recent meeting of the New Jersey State Medical Society, I am erroneously quoted as saying that I had made use of cocaine as a local anæsthetic in amputation of the thigh, and also that I objected to this use of the drug. What I did say was, that I had *witnessed* an operation (the operation—amputation of the thigh—was done by Dr. Varick, who so far as I know was the first to use cocaine in major amputations) in which cocaine was used as a local anæsthetic, and that, owing to the *severe mental suffering* in these cases, I did not approve of cocaine as an anæsthetic in major operations, except in cases where sulphuric ether could not be given with safety. I shall be pleased to have this matter corrected in the columns of The Record."

The Suit brought against Dr. B. A. Watson, of Jersey City, by the Society for the Prevention of Cruelty to Animals, is most unjust and iniquitous. Dr. Watson's experiments with dogs were conducted for the purpose of solving one of the most obscure and perplexing problems in pathology, viz., that of spinal concussion. It is greatly to be regretted that they have been interfered with.

A Good Thing to Cultivate.—The art of thinking, then, is well worthy of cultivation, whether the individual is naturally endowed with logical capacity or represents only indifferent ratiocinative capacity.—*New York Medical Monthly.*

MODE OF PAYMENT OF FEES IN VIENNA.—In Vienna it is usual to give medical men their fees at the end of the attendance, so that when honoraria are offered the hint is understood, and no more visits are paid without further request. Some time since a practitioner was sent for to see the child of a certain tailor, whom he found suffering from fever, but with no signs enabling a diagnosis to be made. The fee was given, and the doctor, hearing nothing further, did not consider his services were required again. However, it was discovered by the police, shortly afterward, that some of the children in the tailor's house were suffering from small-pox. The tailor and the doctor were both summoned, the latter being acquitted, while the former, who was shown not only to have concealed the existence of the disease, but to have taken in work at the time, was sentenced to ten days' imprisonment.

A BACTERIOLOGICAL department will be opened in connection with the Pathological Institute at Berlin, presided over by Professor Virchow. It is probable that Dr. Israel will be nominated director of the department.

REFORMS IN SPANISH MEDICAL STUDY.—Some much-needed reforms, says *The Lancet*, are in contemplation by the Ministry of the Interior regarding the regulations affecting medical study in Spanish universities. Though no addition will be made to the duration of study, the course for the license will be better arranged, so that preliminary subjects will be necessarily studied during the earlier portion of the student career, *e.g.*, histology, which at present is considered an advanced subject, is to be divided into normal histology for first-year's men, and pathological histology for third-year's men. Besides this, elementary clinical study will be included in pathology, and a new subject, viz., the diseases of children, will be added. The doctorate will consist of three subjects, the history of medical sciences, chemical analysis, and public hygiene, including the geographical and historical study of epidemics. The students will also be allowed to visit and practise in the provincial hospitals.

WHOOPING-COUGH SUCCESSFULLY TREATED BY INSUFFLATIONS OF QUININE.—Dr. J. Bachem, of Bonn, has treated sixteen cases by blowing into the nostrils a mixture of quinine muriate and powdered gum arabic (3 to 1). The application was made once or twice daily, and the disease was cured in almost all cases in about three weeks.

ENORMOUS NEGRO MORTALITY.—In many Southern cities, large and small, the negro mortality-rate is nearly double that of the white population. But in Savannah, Ga., according to the *Times-Democrat*, while the annual mortality-rate among the whites is 12.19, that among the negroes is 122.94; and among negro children under five years of age 601.93 per 1,000.

THE VERMONT STATE MEDICAL SOCIETY at its last annual meeting had a very active discussion on the subject of Ethics. Several prominent members frankly confessed that they consulted with some homœopaths, and not with some so-called regulars. The general sentiment seemed to be that the society should either conform to its Code or abolish or change it. Definite action will be taken at the next annual meeting.

PASTEUR has lost still another patient. The sum of over one million francs has been subscribed to the Pasteur Institute.

DISCOVERY OF THE MICROBE OF RABIES.—Dr. G. F. Dowdeswell, announces in *The Lancet* that he has discovered the microbe of rabies. He says: "It is a micrococcus, not very minute, and of the usual form. It stains however, with some difficulty; and this accounts for its having hitherto escaped observation. In the cases of dogs which I have as yet examined, its principal seat is evidently the central canal of the spinal cord and medulla oblongata; thence it pervades the other tissues of the central nervous system, occurring (sometimes in vast masses) around the walls of the blood-vessels, and in some cases within the vessels among the red blood-corpuscles. In the cortex of the hemispheres I have found it, but in very small numbers, and, so far, only in the perivascular and peri-cellular lymph-spaces. In the cerebellum I have not found it at all, neither have I as yet succeeded in finding it in the salivary glands. I shall shortly publish the methods by which it may be stained with certainty. I must, however, state that it does not stain by hæmatoxylin, either with or without a mordant, as asserted by Fol. I have repeated his methods carefully. Neither does it occur within the nerve-fibres, as he states; and, lastly, it is fully three times the dimensions which he gives. I may add that it does not occur in the same situation, treated by the same methods, in normal animals. In the one case of a rabid dog, which I had examined to control my previous observations, the tissues were placed in alcohol so shortly after death as to preclude the possibility of the occurrence of septic organisms. In addition to which, all saprophytes, as far as yet observed, stain very readily with the usual aniline dyes, which this microbe does not. I must point out, in justice to the genius of Pasteur, that these observations on the occurrence of the microbe go far to confirm his statement of the seat of the virus; it may further afford a means of diagnosis in any doubtful case." Preparations of the microbe were shown at the meeting of the Royal Microscopical Society on the 9th ult.

PROFESSOR VON LANGENBECK was recently operated upon by Professor von Pagenstecker, for cataract. The operation, we learn, was a successful one.

APOMORPHINE as a preventive of epileptic attacks is highly recommended by Vallender, who uses it hypodermatically in the usual doses.

RINGWORM IN A NEW-BORN INFANT.—A correspondent of *The Lancet* writes that a lady, who for some time past had had a dread of ringworm appearing in any of her children, was delivered of a female child which was found to have several spots of ringworm on its body and one on the scalp. These have gone on increasing, and now rather an extensive surface of the back is covered with the rings. The writer asks if it is not unusual for this affection to appear in a child of that age.

LONG-LIVED PROFESSORS.—It is said that there are at present at the various German universities no fewer than 157 professors between the ages of seventy and ninety. Of these, 122 deliver their lectures as usual.

Reports of Societies.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

First Annual Meeting, held at Washington, D. C., June 17 and 18, 1886.

THURSDAY, JUNE 17TH—FIRST DAY—MORNING SESSION.

THE first meeting of the Association of American Physicians was held in the Army Medical Museum, Washington.

The meeting was called to order by the President, DR. FRANCIS DELAFIELD, of New York.

ABSTRACT OF PRESIDENT'S ADDRESS.

It was my intention to say some words concerning the objects of the Association, and the best methods of carrying these objects into effect, but when I considered the character and attainments of those whom I was about to address, such a plan seemed to me unnecessary and even impertinent.

We all of us know why we are assembled here to-day. It is because we want an Association in which there will be no medical politics and no medical ethics; an Association in which no one will care who are the officers and who are not; in which we shall not ask from what part of the country a man comes, but whether he has done good work and will do more; whether he has something to say worth hearing, and can say it. We want an Association composed of members, each one of whom is able to contribute something real to the common stock of knowledge; and where he who reads such a contribution feels sure of a discriminating audience.

We are all busy men, working men, ambitious men. We all like to give instruction and gain reputation, and both of these we can do in the societies already existing; but we also want a society in which we can *learn* something. And this, I take it, is the real object of the enterprise which we inaugurate to-day—to form an association of physicians and pathologists to which we may come year after year with the well-founded hope that at each meeting we shall find something *to learn.*

Without further preface I shall ask your attention to a subject of much practical importance:

CHRONIC CATARRHAL GASTRITIS.

The fact that the lining membrane of the stomach is both a mucous membrane and an organ of digestion does, in a measure, confuse our appreciation of the inflammations of this membrane. We are apt to notice especially the disturbances of digestion, and to include all the cases in the general class of gastric dyspepsia.

But the lining membrane of the stomach is, in part, a mucous membrane. It is frequently the seat of chronic catarrhal inflammation, and it then behaves as do the other mucous membranes under the same circumstances.

Now let us turn to the consideration of chronic catarrhal gastritis. Whether we consider the cases which are found at autopsy, or the cases seen during life, it is evident that in the majority of persons the inflammation goes no further than to affect the function of the mucous glands. They constantly produce a thick, tenacious mucus, which adheres in a thick layer to the surface of the mucous membrane. Less frequently the mucus is thin and fluid, and is vomited. With such a change in the mucous glands, the peptic glands may also give evidence of disordered function; but it is important to remember that unimpaired gastric digestion is perfectly compatible with chronic catarrhal gastritis.

Chronic catarrhal gastritis may mean, 1, that the mucous glands produce too much mucus; 2, that, in addition, the functions of the peptic tubules are affected; 3, that the structure of the mucous membrane is so profoundly changed that its digestive functions are anatomically impossible; 4, that from relaxation of the muscular wall, or stenosis of the pylorus, the food is not entirely discharged from the stomach, but portions remain.

The ideas which one has as to the causes of chronic catarrhal gastritis will vary somewhat according to the experience of the hospital autopsy-room and the character of the cases observed in private practice. In the autopsy-room we find more of the cases associated with complicating diseases, or exhibiting the very advanced lesions of gastritis. Organic disease of the heart, emphysema of the lungs, cirrhosis of the liver, Bright's disease, phthisis, and alcoholism are evidently in most of the cases the causes of the gastritis. In private practice, on the other hand, I find most of the cases in adults between the ages of twenty-five and fifty; a smaller number in children and in old persons. In the majority of the cases no cause is to be discovered other than the mode of life and the character of the locality in which the patient lives. The same climatic conditions which predispose to chronic naso-pharyngeal catarrh and chronic bronchitis, have the like effect as regards chronic gastritis. In a smaller number of cases other causes can be discovered. An attack of acute gastritis, or of gastro-duodenitis, or of gastro-enteritis, may be followed by chronic gastritis. Typhoid fever and the malarial fevers may be accompanied with an acute gastritis which may assume the chronic form. In some women the disease seems to begin during pregnancy. Alcoholism and the abuse of drugs furnish their quota of patients. Rheumatism and gout are sometimes unquestionable causes. Cirrhosis, Bright's disease, emphysema, phthisis, and cardiac disease also furnish a certain number of cases.

The first among the symptoms comes pain, varying from a mere feeling of oppression or discomfort to the most severe and agonizing pain. Most common is the feeling of uneasiness or discomfort, either following the ingestion of food or occurring when the stomach is empty. It is not always easy to distinguish this from pain belonging to the small intestine or to the colon. Much worse is the severe pain due, in some cases, to the presence of food in the stomach, a pain which is often followed by vomiting. At first it only comes on when the stomach contains a considerable quantity of food, but later continuing, even after repeated vomiting, so long as the smallest fragment is left. It is so severe that the unfortunate sufferer has no rest by day or by night, deprives himself of almost all nourishment, and finally falls a victim to the opium habit.

Nausea and vomiting are also regular symptoms. The nausea belongs to the early morning hours. The vomiting is most frequently a vomiting of food either in considerable quantities, or vomiting kept up so long as the smallest particle of food is left in the stomach. In other cases large quantities of brownish fluid, mixed with mucus and food, accumulate in the stomach and are vomited from time to time. This is especially the case when the stomach is dilated. Vomiting of pure mucus is seen in a few cases. Vomiting of blood, usually not in large quantities, may occur. Regurgitation of acid fluid, in the morning especially, belongs to alcoholic gastritis.

Retention and fermentation of the food in the stomach are most common with the dilated stomachs, but are by no means confined to them. They are found often enough in other cases of chronic gastritis.

Constipation seems in some cases to depend directly upon the gastritis, and will disappear as this improves without the use of any laxatives. In the same way there are diarrhœas which can be cured by treatment directed to the stomach.

Headache is a symptom. It may follow a variety of types, but perhaps the most common is that which comes on at intervals.

A general loss of health, of which emaciation and loss of muscular strength are the most prominent features, is found with the worst cases of the disease. Inflammation of the tongue and a variety of abnormal sensations referred

to the throat, mouth, and tongue belong to some of the cases.

These are the most marked symptoms which may be referred to the gastritis directly. In the complicated cases, of which there are many, other symptoms are added which it is not necessary to consider at the present time.

The course of the disease is naturally prolonged over many years, and interrupted by periods of improvement. The symptoms come on in attacks, at first not severe, not of long duration, easily relieved in a variety of ways. As the disease continues, each succeeding year marks a greater severity and longer duration of the symptoms.

In attempting to establish a satisfactory treatment for chronic gastritis it is important to state as clearly as possible the problem to be solved. First, we must remember that all patients who suffer from gastric symptoms do not necessarily have chronic gastritis. Besides those who have functional disturbances of the stomach, or cancer or ulcer of the stomach, we find many others in whom gastric symptoms are due to diseases of other parts of the body. Anæmia, uterine disease, the neurotic and hysterical condition, and constipation, often behave in this way. In old people the function of gastric digestion is often impaired simply as a result of old age. To each one of these conditions belongs its appropriate treatment, but it is not the treatment of chronic gastritis.

Still further, we must remember that in many cases of gastritis, palliation of the symptoms is all that we can hope for. After excluding all these there remains a large and important group of cases of chronic catarrhal gastritis, in which we may hope not only to alleviate the symptoms but to cure the disease.

It is evident from the nature of the disease that any treatment intended not merely to palliate, but to cure, must be of long duration, and that it must be repeated from time to time when the inevitable relapses occur. The different plans of treatment which may be adopted are: the curative treatment of climate and mode of life, the regulation of the diet, the administration of drugs, and the use of local applications directly to the inflamed membrane.

Climate and mode of life, I believe, offer the most certain means of curing chronic gastritis. The two points of importance are, first, the locality selected must be one where the patient can live an out-of-door life; and second, the patient must live in this climate either for several years or for a considerable part of each year. Excellent as this method of treatment is, it is evident that it can be carried out only by a limited number of persons.

The regulation of the diet is a matter which demands consideration in every case of chronic gastritis. In trying to ascertain the best way of feeding these patients I have found only one satisfactory method, and that is to feed them experimentally with different articles of food, and then, after an interval of several hours, wash out the stomach and see how thoroughly these articles of food have been digested and removed from the stomach. After pursuing this course for a number of years I have arrived at the following conclusions:

It is necessary that the patients should be well fed, a starvation diet never answers.

The stomach does not require any rest from the performance of stomachic digestion; on the contrary, it is all the better for being called upon to perform its natural function.

The patients' own ideas as to what food agrees with them are usually erroneous. They are apt either to starve themselves, or to select the least nutritious articles of food.

The use of artificially digested foods, or of substances such as pepsin to assist stomachic digestion, is unnecessary.

The starches, oatmeal, corn-meal, bread, the cereals, the health-foods, are, as a rule, bad. Portions of them remain undigested in the stomach for many hours.

Milk in adults is an uncertain article. It answers very well for some persons, not at all for others.

Meat is usually readily and well digested, but there are occasional exceptions to this rule.

Vegetables and fruits can be eaten, but the particular varieties must be selected experimentally for each patient. I do not believe that any case of chronic gastritis is to be cured by diet alone.

The advantageous use of drugs belongs to the earlier stages of chronic gastritis. At that time they often palliate symptoms, and sometimes even seem to cure the inflammation. In the later stages of the disease their use becomes more and more unavailing.

The use of local applications, made directly to the mucous membrane of the stomach, I regard as the most efficacious plan of treatment for those patients who are not able to leave home and seek a proper climate. The local applications are readily made by the introduction of a soft-rubber tube through the œsophagus into the stomach. Liquid applications are the best. They should be made in such quantities as to come thoroughly into contact with the entire surface of the mucous membrane, although the pyloric end of the stomach is the region where the inflammations are principally situated. They should be made at a time long enough after eating for the stomach to be as nearly empty as possible.

For many cases warm water alone, in considerable quantities, is the only local application needed. In some, however, there is an advantage in medicating the water, and for this purpose I employ a variety of substances. The alkalies, the mineral acids, bismuth, carbolic acid, the salicylates, iodoform, belladonna, ipecac, gelsenium, may each one be employed according to the particular case.

For the first week of this treatment it is wise not to expect any special improvement. Indeed, even a longer time than this may try the perseverance of the physician and the confidence of the patient. Sooner or later, however, the expected improvement begins; the nausea and vomiting cease, the constipation or diarrhœa is improved, the flatulence is no longer troublesome, the headache becomes less frequent, and of more real value than these, the improvement in the general condition of the patient becomes evident. The color, the weight, the appetite, the sleep, the spirits of the patient all show a change for the better. Of all the symptoms the pain is the one which is apt to persist the longest.

For two or three months the patient has to be kept under observation, and the applications to the stomach made by the physician. After this the patient is dismissed, but continues the treatment himself, first every other day, then twice a week, then once a week for several months. The regular relapses of the disease are managed in the same way, but are much more quickly relieved.

I have tried thus succinctly to lay before you the characteristics of a common and important disease, and yet a disease which seems to me not to meet the recognition and attention which it demands. If I can secure for the patients who are made miserable by it a more careful and intelligent management than they are now apt to receive, the purpose of this paper will be answered.

The Committee on Permanent Organization reported a constitution and by-laws. Adopted. The main provisions of the constitution are: That the Association has for its object the advancement of scientific and practical medicine. It shall be known as the Association of American Physicians, and shall hold its annual meeting in the month of June, in the city of Washington, D. C. That the proceedings shall consist of discussions on subjects of general interest in the departments of medicine and pathology; of original communications and of demonstrations of gross and microscopic preparations; of apparatus and of instruments. That there shall be members and honorary members. The number of members shall be limited to one hundred. Physicians of sufficient

eminence to merit the distinction may, to a number not exceeding twenty-five, be elected honorary members, and as such shall be entitled to attend all meetings and take part in the proceedings, but not to vote upon business questions. That nominations for membership shall be signed by two members, be referred to the censors, and be acted upon at the succeeding meeting.

The following Nominating Committee was then appointed to report on Friday morning: Drs. James Tyson, A. Brayton Ball, George B. Shattuck, Frank Donaldson, and Hosmer A. Johnson.

The first paper was entitled,

TENDON-JERK AND MUSCLE-JERK IN DISEASE, ESPECIALLY WITH REFERENCE TO POSTERIOR SCLEROSIS OF THE SPINAL CORD,

by S. Weir Mitchell, M.D., of Philadelphia, and Morris J. Lewis, M.D., of Philadelphia.

It was stated that while a muscle or a nerve may be excited by both electrical and mechanical irritation, the former is to be regarded as a ruder agent than mechanical stimulus. In some cases electricity is inapplicable beyond a certain extent. It was held that the knee phenomenon was a direct muscular response and not due to reflex action. The most delicate test for determining the condition of the muscle is by striking the stretched tendon. This can be done in various situations, as at the knee, ankle, elbow, and jaw. Every distant muscular exertion, such as winking, if accurately timed, exaggerates these phenomena. To demonstrate this the patient should lie down with the knee slightly bent. At the time that the tendon is tapped, or just before, the patient is directed to wink, and it will be noticed that the jerk is much increased. A decided sensation, such as heat, cold, or an injury will increase the responsive power of the muscle or tendon which has been struck. Both the tendon- and the muscle-jerk are reinforced by irritation of distant parts. This reinforcement disappears when the muscles are cut off from the spinal centres.

A blow on the muscle causes the muscle-jerk to extend up and down, but not transversely. In some cases of disease this jerk is irregular. In addition to this contraction the muscles may form a little eminence or mound, which disappears slowly. Late in ataxia this is unusually well marked. It is also observable in some healthy muscles.

The phenomenon of reinforcement was attributed to an increase of tone in the muscle as a result of the distant irritation.

A tabular statement was then presented, giving the results of observation in twenty-three cases of locomotor ataxia. In this table the various symptoms and signs presented were represented by signs. In this way the history of each case could be seen at a glance.

In the first stage of locomotor ataxia the tendon-jerk is diminished or absent, while the reinforcement is fair. In the subsequent stages both the tendon-jerk and its reinforcement are absent. The muscle-jerk and its reinforcement continue normal through the first two stages. In the third stage, while the muscle-jerk is normal, the reinforcement is absent. In the fourth stage the muscle-jerk is increased, while the reinforcement is absent. In the fifth stage the muscle-jerk is diminished, and the reinforcement is absent. In the sixth stage both the muscular jerk and the reinforcement are absent. The increase of the muscle-jerk, late in the disease, may be due to some irritative changes in the muscle, but this has not been positively determined.

In regard to associated movements, in a certain proportion of cases, if the patient is directed to shut his right hand, the left hand will also shut to a certain extent. And if the patient is sitting down the leg may be drawn up. This condition has become more marked as the ataxic condition has increased.

Another symptom referred to, and which was considered a new symptom, was prominence of the eyeballs. While the condition is not as marked as in exophthalmic goitre, it is sufficiently distinct to be apparent if attention has been called to the matter.

Dr. E. C. Seguin, of New York, suggested that when the patient performs some movement, or when his attention is attracted by excitation of a sensory nerve, the cerebral inhibitory influence over the spinal cord is momentarily reduced, and the reflex powers are raised for the moment. The reinforcement seemed to be rather a negative condition.

Dr. H. C. Wood, of Philadelphia, thought that the explanation of the knee-jerk was based on physiological ideas. There are three classes of movements, the voluntary, the reflex, and movements originating in the muscle or in the nerve-endings in the muscle. Until the fact that the time of the knee-jerk is so different from the time of the other reflexes is explained, we must consider that we have these three classes of movements. It is possible that the movements in the muscle are the result of inhibition, but at present we have no proof that such is the case.

Dr. F. Peyre Porcher, of Charleston, S. C., read a paper on

TYPHOID FEVER.

The author described a method of treatment which he considered very satisfactory. As in all cases of high temperature, there is costiveness, the result of the arrest of the intestinal secretions. He recommended a mild laxative at the beginning of the treatment. Any laxative may be employed.

In the treatment of typhoid fever three things are to be considered; the necessity for maintaining the strength of the patient, the support of the system by the use of stimulation, and the morbid effect of high temperature. Special attention was directed to the latter element of the treatment. In reducing the temperature, the speaker had resorted to the use of ice-cold water, which was applied to the head, hands, and arms by the use of towels wrung out of the water and reapplied as frequently as necessary. The applications are continued for ten to fifteen minutes, until the heat of the skin is reduced. The use of baths was considered objectionable, on account of the difficulty of their application, and on account of the prejudice against them. He prescribes for internal use a fever mixture, prepared as follows:

℞. Potassii acetatis ..... ʒ j.
Liquor ammonii acetatis ..... ʒ j.
Spt. ætheris nitrosi ..... ʒ ss.
Tinct. aconiti ..... ʒ ss.
Aquæ ..... ad ʒ iv.

Sig.—A dessertspoonful in a little water, every two hours, so long as the fever continues.

Morphia or the bromides may be added to the above preparation. It may also be employed in other fevers.

Hot pediluvia may also be employed. In malarial cases quinia and arsenic are employed. Later the use of the mineral acids are added. With reference to the use of stimulants, these may be continued as long as the tongue is dry. Oil of turpentine is often called for on account of tympanitic distention of the abdomen. It is also of value as an astringent, and as a general stimulant. The speaker had treated thirty cases in private practice in this manner, of which number three died. In these cases there were causes sufficient to explain the fatal termination.

Dr. James Tyson, of Philadelphia, described a case in which, to reduce the temperature, he wrapped the patient in a sheet which was kept constantly wet with ice-water. This was entirely successful. In this case both antipyrine and thaline were employed, but although they promptly reduced the temperature it soon returned to its original position. When it is necessary to keep the temperature continuously reduced, some modification of the cold pack is, I think, the best method.

Dr. James T. Whittaker, of Cincinnati, referred to the possibility that the high temperature might be nature's way of getting rid of the poison. It has been found that the virulence of the typhoid-fever bacillus can be reduced by heat. It is also possible that the changes formerly attributed to heat may be due to bacilli.

Dr. E. Darwin Hudson, of New York, described the plan of treatment employed at Bellevue Hospital. The treatment is almost negative, consisting in sponging the patient every two hours during the continuance of the temperature above 102.5°, and adherence to an absolute milk diet. The only other measures employed are those directed to the relief of special symptoms occurring in the course of the disease.

Dr. Samuel C. Chew, of Baltimore, referred to the use of quinia by hypodermic injection, in order to reduce the temperature. It seems to have almost a specific action when used in this way.

Dr. William H. Draper, of New York, said that there was, perhaps, nothing more fallacious than statistics in typhoid fever. Cases of fever not truly typhoid are confounded with specific typhoid fever. We have all seen cases in which there was a continued fever, but in which the temperature did not run the typical course. I think that in such cases we have no evidence that they are cases of typhoid fever.

He thought that in the majority of cases the value of antipyretics is not so much in reducing the mortality, but in affording comfort to the patient. The mortality of typhoid fever in the majority of cases depends upon conditions over which a reduction of the temperature would have no influence.

Dr. William Pepper, of Philadelphia, thought that we should be slow in accepting a mortality of fifteen or even ten per cent. as evidence of much success.

An excellent rate of mortality, he thought, could be secured by absolute rest from the first moment of suspicion, and a rigid diet of milk or milk diluted. In addition, he believed that the abstraction of heat by the use of cold water is of great value. A remedy directed to the constant and important lesion of typhoid fever aids in reducing the temperature. Under proper treatment he thought that the mortality should not exceed five or six per cent.

Afternoon Session.

The first business of the afternoon session was the discussion of the question:

DOES THE PRESENT STATE OF KNOWLEDGE JUSTIFY A CLINICAL AND PATHOLOGICAL CORRELATION OF RHEUMATISM, GOUT, DIABETES, AND CHRONIC BRIGHT'S DISEASE?

Dr. James Tyson, of Philadelphia, referee; Dr. William H. Draper, of New York, co-referee.

Dr. Tyson, the referee, began by defining the diseases included in the subject. The usual definitions of rheumatism and gout, as general diseases with local expressions, were given. Diabetes was subdivided into two varieties, the milder and the more severe form. The former consists essentially in a defect in that particular metabolic office of the liver by which glucose is converted into glycogen. It is due to over-stimulation of the liver-cells by the excess of absorbed glucose arising from the habitual over-use of saccharine and starchy foods. The more severe form of diabetes may be termed neurogenous, and is caused by some direct or reflex influence on the vaso-motor centre, whence arises a hyperæmia and accelerated circulation through the liver, as the result of which the glucose absorbed during intestinal digestion is carried too rapidly through the liver to permit its conversion into glycogen. To this is added, in advanced stages, glycogen resulting from the splitting up of the products of digestion of nitrogenous foods.

Taking up the discussion, first as to rheumatism and gout, the referee called attention first to the difference in the morbid anatomy of the two diseases, in the absence of anything specific or peculiar in the changes in the joints in rheumatism, while in gout there is the peculiar deposit of sodium urate in the joints or their vicinity. The composition of the blood is definitely altered in gout by the almost constant presence of an excess of uric acid in combination with sodium, whereas no change of corresponding importance is found in the blood of rheumatism. Heredity plays a much more important rôle in gout than in rheumatism, reaching, in the former, according to various observers, to fifty to one hundred per cent., while in rheumatism the maximum claimed is thirty-four per cent. The early age at which rheumatism presents itself, as compared with gout, implies a difference in the etiology, as does also the absence of renal and the presence of cardiac complications. Alcoholic liquors and over-indulgence of food have no influence in the causation of articular rheumatism. In gout they are all-powerful.

The exciting cause of rheumatism is always cold, dampness, or both. The cause of the explosion or the acute attack of gout is the cause of the disease itself, and is due either to the over-accumulation of uric acid in the blood, whether as the result of increased formation or defective elimination, or to diminished power of resistance of the organism through some accidental cause, atmospheric or physical.

Moreover, except in the case of salicylic acid, which is admitted by all to be useful in both affections, Dr. Tyson thought that the treatment required by the two diseases was different. The treatment of gout is eliminative, that of rheumatism restorative. It is true salicylic acid is efficient in both diseases, but this is not sufficient proof that they are the result of the same cause, so long as that cause is so easily demonstrated in one and not in the other.

The relation of gout to that form of chronic renal disease known as chronic interstitial nephritis is a true correlation, since there is every reason to believe that the cause of gout is one of the causes of this form of chronic renal disease so common in gout, and the evidence of renal disease is often found long before the gout manifests itself.

To estimate the relation between gout and diabetes, it is necessary to remember that there are the two forms referred to. With neither of them is there any pathological relation. Between gout and the first or mild form of diabetes there is a clinical correlation, although many of the facts on which it has been founded the referee believed to be erroneous. Thus, although uric-acid sediments are quite common in diabetes, yet careful quantitative analysis shows no increase in the amount of uric acid excreted. The uric-acid sediments must, therefore, be the result of the excessive acidity so characteristic of diabetic urines, due to the fermentative processes.

Again, it is said the lithæmic urines often contain sugar. This he was confident was much rarer than is commonly supposed, because of the fact that uric acid reduces the salts of copper, and this reaction is mistaken for that of sugar. He thought that the inability of gouty persons to digest saccharine and starchy elements of food should not be regarded as a proof of clinical correlation, because it simply indicates a feeble converting power of the intestinal digestive fluids over the carbo-hydrates. In diabetes there is no defect of this kind. The carbo-hydrates are converted into glucose with facility. The trouble is with the liver, which is not able to reconvert the glucose into glycogen.

Between gout and the more severe form of diabetes, which is the result of disease at a point distant from the liver, there is no correlation, either clinical or pathological.

Between diabetes and Bright's disease there is a relation of this kind. The effect of the circulation through the kidneys, surcharged with sugar alone, or with sugar,

acetone, and diacetic acid, is to irritate the renal cells and produce a degree of chronic parenchymatous nephritis, instead of the interstitial nephritis which is so closely correlated with gout. From recent observations there is reason to believe that these changes take place in the kidney much earlier than used to be supposed, and that albuminuria appears correspondingly early, either coincidentally or in alternation with glycosuria. The difference between the relation of gout to Bright's disease and of the more severe or neurogenous diabetes is, that in the former that which causes the gout causes the Bright's disease, so that there is a true correlation, whereas in neurogenous diabetes, it is a result of the diabetes which causes the renal complication.

As to diabetes and rheumatism, the idea that these two diseases are closely correlated has apparently received substantial support from the results of treatment of the two diseases by salicylic acid. Occasional reports as to the efficiency of salicylic acid in diabetes have acquired additional impulse from views which have recently been promulgated by Latham, who concludes, on clinical grounds, that there are two forms of diabetes—one due to neurotic disturbances of the function of the liver, and the other due to neurotic disturbances of the functions of muscle. As the result of the latter, glucose is formed in the muscles and passes thence into the circulation. This latter is so closely related to rheumatism, that one degree of oxidation develops the materies morbi of rheumatism, and another develops glucose. Having shown also by the same reasoning that the administration of salicylic acid arrests the formation of uric acid, lactic acid, and glucose, he thus explains the usefulness of salicylic acid in some forms of diabetes, and says that in doses of from ten to twenty grains three times a day, he has seen it produce marked improvement. More recently, Holden reports the successful treatment of six cases of diabetes with salicylic acid.

The referee, whose experience with salicylic acid in the treatment of diabetes had not heretofore furnished satisfactory results, had not yet had the opportunity of applying this more recent principle, that it is in the cases with rheumatic pains that it is especially serviceable. He held that until more cases were collected in which this principle of treatment was applied, the question was not ripe for decision. In a single case which had come under his observation in which it was claimed that salicylic acid had been very useful, the sugar had been found increased rather than diminished.

Dr. William H. Draper, the co-referee, said: It is fair to presume that this question would not have been propounded if clinical experience did not suggest it. It certainly is not yet justified by the present state of knowledge in pathology. Although the question is premature from a pathological point of view, it can hardly be regarded as without interest, and possibly importance, from a clinical standpoint. It is from this latter aspect that my remarks shall be made.

By gout is meant, I take it for granted, not simply the arthritic malady, but a diathesis which manifests itself through more or less well-defined derangements of nutrition, which give rise to a variety of secondary cerebro-spinal irritations, and provoke definite structural changes in the blood-vessels, in the connective tissue of the parenchymatous organs, and in the nervous system.

By diabetes we are to understand, I suppose, the more common and lesser form of that disease.

Rheumatism is so vague in its ordinary application that it is not easy to comprehend exactly what is meant in this question. It is presumed that it covers acute articular rheumatism and the subacute forms in which the differential diagnosis from subacute gout is so difficult.

The form of Bright's disease is, probably, the form of chronic diffuse nephritis which is characterized by extreme sclerotic changes in the connective tissues of the kidneys and in the arteries, and by cardiac hypertrophy.

I think that the experience of most clinical observers will justify the statement that gout, rheumatism, diabetes, and chronic Bright's disease are frequently associated, sometimes in the same individual history, more frequently in the histories of families. The association of gout and even chronic rheumatism with chronic Bright's disease is very common in the individual, while the association of gout with diabetes, or of diabetes with granular kidney, is not common. Chronic rheumatism may exist without even being complicated with gout or diabetes, or chronic nephritis, but in families where the association of morbid phenomena can be traced, I think that it will be acknowledged that these diseases are frequently found in more or less marked alliance.

Granting this association, are there any facts to show their correlation? Are they reciprocal, interchangeable affections, transmutations of the same morbid process, and therefore recognizing a common determining cause, as yet unknown?

The first fact that suggests the idea that they are cognate forms is that of heredity. First, as to gout and diabetes. Glycosuria often recognizes a gouty ancestry—the term glycosuria being used to express the lighter form of the disease. In many cases the grave form of diabetes is not traceable to a gouty origin. The speaker had seen many cases leading him to believe that, excluding the cases of diabetes of nervous origin, careful investigation of the family history would reveal the presence of gout in the majority of cases.

Second, concerning gout and rheumatism. The fact of heredity as establishing a connecting link is not so evident. But it has been pointed out that articular rheumatism frequently occurs in the children of gouty parents. The influence of heredity in determining the association of the subacute form of rheumatism and gout cannot be positively decided.

Third, as to the frequent manifestation of heredity in the history of gout and interstitial nephritis, I think that there can be no question. This form of Bright's disease not only occurs as a complication of inherited articular gout, but is often observed in the members of gouty families who have themselves never exhibited any articular lesions. This is especially seen in the female line.

I wish next to call attention to the association with these diseases of certain common derangements of nutrition. While it cannot be claimed that organic chemistry has as yet done more than formulate the general principles that gout and diabetes are associated with the signs of incomplete metamorphosis of the food-elements, it is daily making progress in solving the complex processes by which each atom of carbonaceous and nitrogenous food is finally resolved into carbonic acid and urea. In these two diseases there is a diminished capacity for converting the carbo-hydrates. The occurrence of sugar in the urine of gouty persons, and of lithic acid deposits in the urine of diabetics, is not infrequent.

Gout, diabetes and rheumatism, in their treatment by medicines, exhibit reciprocal relations. In these various affections the alkaline treatment is used with benefit. It is admitted that the value of the alkaline treatment in acute rheumatism is not sufficiently well established to justify the proposition that the disease is on that ground a correlation of gout. The value of salicyl compounds in the treatment of gout, diabetes, and rheumatism suggests the idea that these diseases have something in common, either casual or concomitant, which the preparations of salicin antagonize.

The clinical observations which support the idea of a correlation of gout, diabetes, rheumatism, and certain definite structural changes in the kidneys and blood-vessels, namely, the frequency of hereditary transmission in the same family, and their occasional co-existence in the same individual, the common idiosyncrasy of a diminished capacity for the complete conversion of the carbo-hydrates, and, finally, the common reactions which they exhibit to the same remedies, are of course open to criticism, but they nevertheless excite a reasonable sus-

picion that these diseases have at least certain common features which in all probability proceed from similar derangements of physiological functions.

This much it seems to me may be acknowledged, even in the absence of any adequate pathological evidence that these diseases are attended with any common structural lesions or specific functional disturbances.

There are many unsolved problems in the pathology of gout, diabetes, and rheumatism, and the working hypotheses of the clinical observers in this field are being constantly unsettled by the revelations of the physiological laboratory. It would seem, therefore, that the only conclusion we are at present justified in making as to the correlation of the disease in question is this: Clinically, they are often associated by hereditary transmission, by co-existence and alternation in the same individual, by presenting similar idiosyncrasies in regard to the power of converting the carbo-hydrates, and by being more or less successfully controlled by the same remedies; pathologically, they must still be regarded, in the absence of any demonstrable common determining cause, either functional or structural, as more or less distinct and specific diseases.

Dr. J. T. Dana, of Portland, Me., said that it seemed to him that this discussion might properly have been extended a little, so as to include rheumatoid arthritis. In this affection he thought that the differentiation of it from the other affections has been well made out.

Dr. E. G. Janeway, of New York, remarked that the English people, all through, are gouty. Any rheumatic tendency, except in such individuals, will not hold in other countries. We do not find the same correlation in America. A point which he had noted was, that while members of the Hebrew race are very subject to diabetes, they do not have gout and rheumatism in the same proportion.

With reference to the presence of albumen in the urine of diabetics, in many cases this was to be explained by the irritation of the urinary passages by the saccharine urine.

Dr. A. L. Loomis, of New York, said from a pathological standpoint we could not at present regard these diseases as, directly at least, correlated, but from a clinical standpoint there are many things which make it difficult for us to divest ourselves of the idea that there is a correlation in rheumatism, gout, diabetes, and chronic Bright's disease. These clinical phenomena are often so striking that one comes almost to regard these diseases as different manifestations of the same causes.

There are cases which compel us to take the position that, while in their clinical phenomena they differ very markedly, still in their origin and development they seem to have many things in common; in other words, their correlation seems to be complete.

Dr. H. C. Wood, of Philadelphia, had been led by his experience to conclude that gout and rheumatism were the same thing. He was unable to make the diagnosis between them.

Dr. William Pepper, of Philadelphia, said that the clinical evidences of the correlation of these diseases seemed to him to be so great that we cannot safely disregard it. In considering such common diseases, we must, of course, exclude mere coincidence. He agreed with Dr. Janeway as to the frequency of diabetes in the Jewish race, but he had also found such persons very subject to lithæmia. In all these cases, the importance which a diminution of vital resistance of any particular part plays in the development of the local manifestation must be remembered.

Dr. Dana has referred to rheumatoid arthritis. This appears to be the form in which the nervous element is most marked. All have seen cases in which rheumatoid arthritis has been preceded by influences acting directly upon the nervous system. When we consider the immense amount of nerve-force required in co-ordinating the digestive processes of the stomach, liver, and kidneys, and in superintending the metabolism in the tissues, it seems clear that a depressed condition of the nervous system must play a large part in the production of these affections. In studying cases of these diseases we are usually able to obtain a history of some cause of depression of the nervous system, and this affords a powerful argument in favor of the correlation between these diseases.

The explanation of Dr. Janeway as to the cause of the albuminuria does not hold good in many of these cases. The disappearance of the sugar is not always accompanied by a corresponding decrease in the quantity of albumen.

Dr. A. Jacobi, of New York, said, in regard to the connection between diabetes and gout, that there are several forms of diabetes. The form particularly connected with gout is that due to disturbances of the nutritive processes, particularly that of the liver. This is the form in which the salicylates do good. Their action has seemed to him to be due to the influence of these remedies over the liver, in increasing the quantity of bile and in liquefying it. They are therefore powerful agents in diminishing the tendency to the formation of gall-stones. The forms of glycosuria which come and go are usually benefited by salicylate of sodium. This form of diabetes is generally found in anæmic persons, and not infrequently among women of the Jewish race.

In reference to Bright's disease, this is quite common at the age of forty or fifty, when atheroma of the small arteries appears. At that time gout is also common, and the co-existence of the two does not necessarily indicate a common causation.

Dr. William H. Draper, of New York, in concluding, said that in the cases of rheumatoid arthritis where a reliable history could be obtained he had, as a rule, found evidences of a gouty origin. In regard to gout, he was strongly inclined to believe that the presence of uric acid is only an epi-phenomenon, and that its presence in the joints is not absolutely essential to the occurrence of other true gouty lesions.

In the diabetes of Jews, he had seen the same association of lithæmic conditions as in other races.

He agreed with Dr. Wood in regard to the difficulties of diagnosis. The practitioner cannot always satisfy himself whether he is dealing with gout or rheumatism.

Dr. James T. Whittaker, of Cincinnati, O., read a paper on

SPASM OF THE GLOTTIS IN RICKETS.

The author emphasized the fact that this accident belongs exclusively to rickets, and dwelt upon the value of recognition of this fact, because rickets is, generally speaking, a curable disease, and the spasm of the glottis disappears with the successful treatment of its cause, while treatment addressed to the larynx directly remains without effect.

The speaker next quoted from a number of authorities, to show that this relation between the two affections is not so universally recognized in this country and England as in Germany and France. The two latest authors of text-books in Germany, Strimpell and Sichorst, declare, one that two-thirds, and the other that nine-tenths, of all cases of spasm of the glottis depend upon rickets.

Spasm of the glottis is often the first sign to unmask rickets, for the other evidences of the disease are often attributed to other causes. Thus, general malaise is attributed to dentition, intestinal catarrh to errors in diet, fever and sweating to malaria, bone deformities to premature efforts upon the feet, etc.

Spasm of the larynx indicates the stage rather than the degree of rickets, in that it occurs mostly in cases of rapid advance of the disease, and does not appear in cases of slow progress. So in the spring and fall, when rickets advances in leaps, spasm of the glottis has occurred in epidemic form.

The essayist discussed next the various theories of rick-

ets, which continues to elude investigation to a degree characterized as exasperating. But facts accumulate which go to give it place among the chronic affections. The exemption of hot climates and mountains, Iceland, the Faröe Islands, the complete immunity of Davos, notwithstanding the improper feeding and improper hygiene of sucklings at these places, shows that faults in diet cannot be the cause of it and the symptomatology of it fits better among the chronic affections produced by specific causes.

Spasm of the glottis, in the absence of any constant lesion, falls among the neuroses. The question as to the reflex or direct character of the irritation producing it was decided, after a review of the evidence, in favor of the latter, and since Rosenbach has demonstrated the micro-organism of tetanus, which often begins with and may go no further than trismus, the maintenance of a mycotic theory for the laryngospasm of rickets may be adopted as the best provisional explanation. The mode of onset and character of the accident were next detailed and the symptomatology illustrated with a typical case.

The inefficiency of anæsthetics and all direct means of treatment, as by intubation, tracheotomy, etc., were mentioned next, and douches, flagellations, electricity, cold air, direct appeals to the skin on the first appearance of attack, were described as the best means of combating, and more especially of preventing, the attack. Cod-liver oil, and more especially phosphorus, which may be looked upon almost in the light of a specific, were considered the best means of speedily relieving the rickets, and thus removing the cause of the laryngeal spasm. It has the most favorable prognosis of all kinds of laryngospasm, as Monte lost but 8 of 329 cases.

Dr. Edward T. Bruen, of Philadelphia, read a paper entitled

NOTES ON SOME CASES OF DIAPHRAGMATIC PLEURISY.

Dr. Bruen said that the object of his paper was to briefly state the diagnostic features of diaphragmatic pleurisy. He did not attempt a review of the interesting historical literature of the disease. He admitted that the diagnosis of this affection was often only established at the post-mortem table, since the process is often latent and frequently possessed few distinctive physical signs. Primary pleurisy of this part of the pleura he considered rare. It is oftener a complication attendant upon acute inflammatory processes in the adjacent pulmonary lobes; the costo-parietal pleura, or in the liver or peritoneum. Under the foregoing conditions, invasion of the diaphragmatic pleura may be characterized by special symptoms which may entitle one to designate this class of cases as acute inflammation of the diaphragmatic pleura.

Inflammation of this portion of the pleura may be a subacute or chronic process, developed in consequence of contiguous subacute or chronic inflammation or malignant growths. In such cases, the process in the diaphragmatic pleura may become specialized by symptoms which should lead the clinician to differentiate the diaphragmatic pleurisy from the associated pathological changes.

In the acute form of this disease many of the more prominent and differential symptoms may be masked by the greater importance of the primary disease.

The symptoms of diaphragmatic pleurisy may also be masked if the liver be enlarged or the intestines distended with gas, for these conditions may sensibly modify the freedom of the diaphragmatic movements.

The terminations of the acute cases are intertwined with the associated pathological processes, and the gravity of the case is not necessarily increased if the symptom of hiccough is subordinate, the latter being an exceptionally uncontrollable and exhausting symptom. In primary cases a favorable issue may occur.

To show that the diaphragmatic pleurisy may progress to a marked degree without the manifestation of diagnostic symptoms, the case of a negro man was related in whom post-mortem examination showed lesions of general miliary tuberculosis, with marked thickening of the diaphragmatic pleura. It was shown in this case that the peritoneum was infected through the connecting channel of lymphatics between the pleura and peritoneum. During life some friction-râles were heard along the upper border of the fifth rib and near the margin of the seventh in the axillary line, although a large amount of fluid was contained in the chest. The autopsy showed that the lung, rendered rigid and thick by the tubercular infiltration, projected as a rigid mass into the pleural space, displacing the fluid, and then the separation of flakes of exudation doubtless produced the râles. It was stated that in the subacute or chronic cases the special symptoms of diaphragmatic pleurisy were more conspicuous than in many of the acute forms of the disease.

Illustrative cases were cited, one occurring in the Philadelphia Hospital, secondary to induration of the right apex and general emphysema, in which the disease was correctly diagnosticated, as the post-mortem examination showed.

The diagnosis of a disease in which there is often so little that is distinctive, must necessarily be a difficult problem. It was shown by the relation of several post-mortem examinations that the process can exist in advanced form, on one side of the diaphragm at least, without special symptoms. If the diaphragmatic pleurisy should complicate any form of pulmonary or hepatic pathological process, or circumscribed peritonitis of the superior part of the abdominal cavity, one may note that the subjective sense of respiratory distress and the objective symptoms are disproportionate to those conditions, and therefore the possibility of the existence of diaphragmatic pleurisy should be considered.

The more important diagnostic symptoms which, if present, should direct attention to the possibility of diaphragmatic pleurisy, are, in the order of their frequency and importance, as follows: Subjective sensation of pain over the zone which borders the diaphragmatic plane, pain at the point described by Dr. Mussey, viz., one or two fingers'-breadth from the middle line on a level with the tenth rib, or at the intersection of a line drawn from the osseous part of the tenth rib and one drawn along the sternum. The pains may be constant, yet also paroxysmal or provoked by pressure, or by increased respiratory motion, by irritation of the diaphragm, swallowing or vomiting, or by the pressure of the distended abdominal viscera. Radiating pains around the chest and upper abdominal zone may occur. Fixation of the diaphragm is an equally important symptom. There will usually be feeble or absent respiratory murmur near the diaphragmatic zone. Dry or moist friction râles may be audible along the converse surface of the diaphragmatic pleura. The percussion resonance may be dull when there is much exudation, but more commonly it is tympanitic, since the partial paresis of the diaphragmatic muscle permits the pressure of the abdominal viscera to raise it somewhat above its usual area. In certain cases the posture of the patient may be bent forward with hypochondriac retraction and epigastric hollowness, but the dorsal decubitus is very often maintained. The respiration is quickened in a few cases, so that there may be dyspnœa or orthopnœa, but these symptoms may be almost entirely absent in subacute or chronic cases on account of the compensatory costal respiration. Cough is a variable symptom, and the same may be said of hiccough; both are often absent. Finally, in the writer's experience, diaphragmatic pleurisy has been chiefly a thickening with adhesions, rather than accompanied with much fluid effusion. Hence the importance of noticing the foregoing symptoms, since the presence of much fluid effusion would be more obvious by means of percussion, auscultation, and other physical signs.

The prognosis was stated to be intertwined with the

intercurrent pathological processes, and the power of adaptation possessed by the pulmonary system is so great that the duration, even of diaphragmatic pleurisy, may be indefinite.

DEMONSTRATION OF BACTERIAL CULTURES FROM A CASE OF MYCOTIC ENDOCARDITIS IN MAN,

and of Specimens showing the Experimental Production of the Disease in Rabbits, by DR. T. MITCHELL PRUDDEN, of New York.

The communication was a preliminary one, the experiments not having yet been completed. For some years the presence of bacteria has occasionally been observed in the cardiac and peripheral lesions of malignant ulcerative endocarditis. It has, however, been found that, not only not all cases of acute vegetative endocarditis, but not even all cases of ulcerative endocarditis, present bacteria in their lesions. The speaker thought that the anatomical distinction was not clearly enough drawn between simple and malignant ulcerative endocarditis. Of eleven cases of well-marked ulceration of the valves which he had studied within the past four years only four showed the presence of bacteria.

In only one case of malignant ulcerative endocarditis was he able to isolate and study the living bacteria. This was a case of pyæmia following cuneiform osteotomy for club-foot. The tests applied showed the bacterium to be the staphylococcus pyogenus aureus.

The experiments on animals were then described, and the following conclusions were drawn: If we sum up the results of combined morphological and biological examination of the cases thus far studied, we find that the sphero-bacteria found in the cardiac and peripheral lesions were the stryphococcus pyogenus and the staphylococcus pyogenus aureus and albus, either alone or together. The intravenous injection of either of these, or a mixture of them, into the rabbit, after mechanical or chemical injury of the endocardium, is capable of inducing lesions strictly analogous, if not identical, with those found in malignant ulcerative endocarditis in man. The coccus sepsis of nicolain is capable of producing similar results. Neither the endocardial injury nor the intravenous injection of bacteria alone are sufficient to induce the cardiac lesion. Both are necessary. As far as the observations go, they tend to confirm the view that malignant ulcerative endocarditis is simply one of the forms of pyæmic lesion determined by the predisposing conditions of the endocardium. Whether or not there are other forms of the disease induced by other species of bacteria, or having no relation to bacteria at all, are questions which are more likely to be settled by experiment than by conjecture.

Adjourned.

FRIDAY, JUNE 19TH—SECOND DAY—MORNING SESSION.

The first paper was by DR. W. T. COUNCILMAN, of Baltimore, on

CERTAIN ELEMENTS FOUND IN THE BLOOD OF MALARIAL FEVER.

It has long been known that changes in the blood occur in this disease. It is now known that in the red corpuscles there are certain bodies which appear to be living organisms, and these occur only in this disease. These are found by taking a drop of blood and spreading it on a slide, so that there shall be but a single layer of corpuscles. These are stained with a weak solution of fuchsin. The nuclei of the white corpuscles will be intensely stained, the red slightly stained, and in some of the red corpuscles will be seen brightly stained bodies of irregular shape. These exhibit distinct amœboid movements. The variety of their changes of form was illustrated by drawings. Certain hyaline bodies are also found, and were described. The speaker then referred to the work of other investigators in this field, and gave a review of the results which they had obtained.

TETANY,

was the title of a paper by DR. H. M. LYMAN, of Chicago.

Tetany may be defined as a more or less generalized intermittent, usually tonic convulsion of the muscles of the limbs and trunk; sometimes involving the face and visceral organs, usually painful, but never attended with loss of consciousness. The disorder is functional, and is based upon no distinctive pathological lesions of the central nervous organs. It is manifested in a series of attacks which occur at intervals, varying in length from a few hours to weeks or even months. During the paroxysms the flexor muscles are usually the seat of contracture, but sometimes the extensor muscles of the limb are principally involved. Single muscles alone may be attacked. These contractions may be very energetically developed, with considerable pain, or they may be sluggish and painless. The pain is usually due to the muscular spasm, but neuralgia may be associated with the cramp, and the skin may sometimes become inordinately sensitive. The pain may at other times become located about the joints, which then present the characteristic appearance of rheumatism. Diminished sensibility in certain parts of the body may be sometimes observed during or after an attack. The special senses are rarely disturbed. The action of the heart is seldom changed, except by transient palpitations.

The disease is rarely fatal, although death has occasionally resulted from prolonged spasm of the respiratory muscles. The duration of the disorder is quite variable and relapses are rather frequent.

Having no relation with any particular lesion of the nervous centres, tetany appears to be dependent upon a functional instability of the nervous and muscular organs.

The treatment must be directed in a general way against the fundamental instability of the individual constitution. Mild attacks require no special therapy, but severe attacks often demand the energetic use of narcotics and anæsthetics for their relief.

DR. REGINALD H. FITZ, of Boston, read a paper on

PERFORATING INFLAMMATION OF THE VERMIFORM APPENDIX; WITH SPECIAL REFERENCE TO ITS EARLY DIAGNOSIS AND TREATMENT.

The paper was based upon an analysis of two hundred and fifty-seven cases of unquestionable perforating ulcer of the appendix, and of two hundred and nine cases diagnosticated as typhlitis, perityphlitis and perityphlitic abscess. In the latter series the diagnosis was clinical, not anatomical.

The important features in the etiology of appendicitis were considered, also the limitations as to sex and age. It was found that the disease occurred most frequently among previously healthy youths and young adults, especially males; that a fecal concretion or foreign body was present as a local cause in more than three-fifths of the cases. Attacks of indigestion and acts of violence, especially when indirect, were exciting causes in one-fifth of the cases. The action of these causes was favored by a constipated habit or by congenital or acquired irregularities in the position and attachment of the appendix.

The first characteristic symptom of a perforating appendicitis was found to be a sudden severe abdominal pain, usually in the right iliac fossa, where tenderness could always be found, even when the pain was referred to some other locality. The pain was attributed to the actual perforation or the detachment of fresh adhesions.

Fever was the next characteristic symptom, and occurred in the course of twenty-four hours. Finally came the swelling, which made its appearance in the course of three days.

The chief source of danger from the appendicular peri-

tonitis arose from its becoming generalized. Such a result followed most frequently between the second and fourth days. More than two-thirds of the patients died during the first eight days, and two-thirds of these between the fourth and eighth days inclusive.

The reader recommended at the outset the opium treatment, with rest and a liquid diet, the food being given in small quantities, frequently repeated. If it became evident that general peritonitis was imminent at the end of twenty-four hours after the sudden intense pain, the appendix should be exposed and removed. Usually the symptoms were not so urgent that the appearance of the swelling could not be awaited. Although Willard Parker advised that the abscess might be opened as early as the fifth day, the practice has been to operate at a later date. Forty-seven per cent. of the cases were operated upon in the second week, and twenty-six per cent. after the third week.

More favorable results in the future were to follow the earliest possible opening of the swelling. This, in most instances, was at the outset a sac formed by a circumscribed peritonitis. It was usually present on the third day of the disease, dating from the pain, its first marked characteristic symptom. Negative results from a diagnostic puncture did not contraindicate the operation.

Dr. William Pepper had been led by his experience to believe that perforation of the appendix is only the explosion of an old catarrhal appendicitis, and that it is not an acute idiopathic affection.

The diagnosis in these cases is a matter of great difficulty in the early days, except where it is associated with considerable pericæcal inflammation.

He agreed with Dr. Fitz that early operation gives the only chance of saving the patient; the third day is not too soon. The difficulty is to arrive at a sufficiently clear diagnosis at that early date to justify laparotomy as an exploratory operation.

Dr. J. T. Dana, of Portland, Me., thought that it was not rare to find inflammation of the appendix as a latent affection. In a case which he had recently seen the first symptom was the occurrence of general peritonitis. The case resulted fatally in seventy-two hours. At the autopsy general peritonitis was found, and there was an opening in the appendix through which a concretion had escaped. A second was found within the appendix. There had been no previous symptoms to call attention to disease of the appendix.

Dr. A. L. Loomis, of New York, remarked that this was a positive paper, and it gives us some positive data on which to base our modes of action in this condition. He thought that it was impossible, in the majority of cases, to make an early diagnosis by the ordinary means. Of the symptoms given by the patient the most certain indication seems to be given by the occurrence of a chill. When pain is marked it will usually be localized in the left side, but not necessarily. Recognizing the importance of the early diagnosis, he decided, some years ago, to put the patient under the influence of an anæsthetic, and examine by the rectum and externally. The patient died. In three cases he had made the diagnosis by this plan. It must be remembered that the vermiform appendix does not occupy the same position in all individuals.

As soon as the diagnosis of perforation is made out the operation should be performed.

Dr. E. G. Janeway, of New York, divided these cases of appendix disease into three classes. In one an inflammatory process of the cellular tissue, with or without the formation of pus, is established. This may go on to recovery. If pus forms, surgical procedures should be resorted to. In another class of cases there is a circumscribed collection of pus in the peritoneal cavity. In this class operation should be resorted to as soon as the presence of pus is determined. In the third type we have, as a result of the perforation of the appendix, general peritonitis. The pain and tenderness in these conditions are not always on the right side. As has been said, the position of the appendix is not constant.

In these cases you can generally find, on careful examination in the region of the cæcum, at some point, a feeling of deep-seated induration, and at this point there is tenderness.

The Association then went into executive session.

The officers elected for the ensuing year are as follows:

President—Dr. S. Weir Mitchell, of Philadelphia.

First Vice-President—Dr. Francis Minot, of Boston.

Second Vice-President—Dr. R. Palmer Howard, of Montreal.

Secretary—Dr. George L. Peabody, of New York.

Recorder—Dr. James T. Whittaker, of Cincinnati.

Treasurer—Dr. W. W. Johnson, of Washington.

Council—Dr. William H. Draper, of New York; Dr. Robert T. Edes, of Boston; Dr. H. M. Lyman, of Chicago; Dr. Samuel C. Busey, of Washington; Dr. Frederick C. Shattuck, of Boston; Dr. William Osler, of Philadelphia, and Dr. W. W. Welch, of Baltimore.

The proposition with reference to the formation of the Association of American Physicians and Surgeons was presented and approved. The following committee was appointed to confer with other organizations: Drs. William Pepper, of Philadelphia; Robert T. Edes, of Boston; R. P. Howard, of Montreal; James T. Whittaker, of Cincinnati, and Francis Delafield, of New York.

Adjourned.

Afternoon Session.

Dr. William M. Polk, of New York, read a paper on

peri-uterine inflammation,

which will appear in a future number of The Record.

an experimental study of glomerulo-nephritis,

was the title of a paper by Dr. W. H. Welch, of Baltimore.

The questions which have not as yet received full and satisfactory answers are: What is the origin of the cells which often in nephritis occupy the space between the glomeruli and the capsule of Bowman? Does migration of the white corpuscles or diapedesis of the red corpuscles take place through the glomerular capillaries? What relation, as to frequency and intensity, do changes in the glomeruli play in the pathology of Bright's disease? In expectation that light might be thrown upon these questions the speaker had experimented on rabbits and white mice, by the production of acute cantharidal poison.

Microscopical examination of the kidney in the rabbit shows here and there foci of infiltration, with small round cells, doubtless migrated white blood-corpuscles. The epithelium of the convoluted tubes is in places normal in appearance; in other places it is swollen, and often the inner part of the cells is broken off, appearing as a granular mass in the lumen of the tube. The most marked change is found in the Malpighian bodies. In the greater number of these there is between the glomerulus and Bowman's capsule a wide space, partly or wholly filled with cells. These are larger than white blood-corpuscles. They are frequently arranged in a crescentic mass. These appearances are similar to those described in glomerulo-nephritis in man. In the latter case these cells are attributed to the swelling and desquamation of either the capsular or glomerular epithelium. Such explanation does not hold in the present case. There are no appearances which justify the derivation of the greater number of the cells from the epithelium of the glomerulus. These cells cannot be regarded as white blood-corpuscles changed by the action of the poison, for the cells circulating in the blood are exposed to the same poison. These cells may be derived from

the epithelium of the convoluted tubes in immediate communication with the Malpighian bodies. The cells in the capsular space are identical with those in the convoluted tubes. At times there can be found groups of cells arranged in the form of a ring, with a central space just like the epithelium of the uriniferous tubules.

Swelling of the endothelium and accumulation of cells in the glomerular capillaries appears to be a nearly constant lesion in the acute nephritis of scarlet fever. In one case examined this was almost the only lesion in the kidney. Occasionally pathologists meet with kidneys in which the apparent changes do not explain the symptoms. In such cases careful examination of the glomerular capillaries should be made. It is difficult to think of any lesion of the kidney more destructive to its function than occlusion of the capillaries.

While disposed to attach much importance to the changes in the glomerular capillaries, we are not justified in asserting that these changes constitute the primary and essential cause of Bright's disease. They are co-ordinate with other lesions.

Dr. William Osler, of Philadelphia, read a paper entitled

BICUSPID CONDITION OF THE SEMILUNAR VALVES AND ITS RELATION TO AORTIC DISEASE.

A bicuspid condition may be said to exist when two of the three sigmoid cusps have more or less perfectly fused, so that the arterial orifice is guarded by only two segments. The abnormality is a well-recognized one. Dilga recently collected the statistics; and has found sixty-four cases of this condition in the pulmonary artery, and twenty-three in the aorta. This statement gives an incorrect idea of its frequency in the latter vessel. In over eight hundred autopsies at the Montreal General Hospital, there were eighteen cases, seventeen in the aortic valves alone, and in one pulmonary and aortic segments were both involved.

With the exception of one case, a fœtus at the eighth month, the patients were adults. The ages ranged from twenty to sixty years. This contrasts in a marked manner with the history of this defect in the pulmonary artery. A great majority of the instances present other serious anomalies of development, and death takes place before puberty. Unquestionably the majority of the cases are congenital, and result either from faulty development or fœtal endocarditis. The former view seems the more probable.

Dr. George M. Sternberg, U. S. A., read a paper on

THE BACILLUS OF TYPHOID FEVER.

Recent researches support the view that the bacillus described by Eberth in 1880 bears an etiological relation to enteric fever, although the final proof that such is the case is still wanting. This proof would consist in the production in one of the lower animals of the specific morbid phenomena which characterize the disease as it occurs in man, by inoculation of a pure culture of the bacillus. Thus far we have no evidence that any one of the lower animals is subject to the disease as it occurs in man; but Fraenkel and Simmons have shown that the bacillus of Eberth is a pathogenic organism, and that pure cultures injected into the peritoneal cavity of mice, or into the circulation of rabbits, causes the death of these animals, and that colonies of the bacillus are found in the spleen, which resemble in every respect the colonies found in the spleen and other organs of typhoid cases.

The researches of Eberth, Meyer, Gaffky, Fraenkel, and others, indicate that this bacillus is constantly present in the intestinal glands and in the spleen of typhoid cases, and Gaffky has shown that pure cultures may be obtained from the spleen even in cases in which a microscopical examination fails to demonstrate the presence of the characteristic colonies.

The researches of Brieger show that a toxic ptomaine is produced as a result of the vital activity of Eberth's bacillus, when it is cultivated in albuminous culture media. This injected into guinea-pigs, causes salivation, diarrhœal discharges, debility, dilated pupils, rapid respiration, and death at the end of twenty-four or forty-eight hours.

Demonstrated facts relating to the propagation of typhoid fever indicate that it is due to an organism which is capable of multiplication external to the human body, in a variety of organic media at comparatively low temperatures. Eberth's bacillus complies with these conditions. In consideration, therefore, of its constant presence, and the absence of any other organism, as shown by microscopical examination and culture experiments, the inference seems justifiable, in the recent state of science, that this bacillus bears an etiological relation to the disease in question.

Dr. E. C. Seguin, of New York, gave

A CLINICAL REPORT OF NINE CASES OF HEMIANOPSIA.

He presented an abstract of nine cases of lateral hemianopsia due to cerebral lesion, and called attention to the following points of the nine cases: Five had right lateral hemianopsia, and four left lateral hemianopsia. Three of the cases of right-sided hemianopsia presented the following association of symptoms: Hemianopsia, right-sided hemiparesis with post-paralytic ataxia and partial hemianæsthesia. Two of these cases also exhibited alexia without other aphasic symptoms. It is interesting to note that all cases of right-sided hemianopsia do not have ataxia, and also that post-paralytic ataxia is not always accompanied by hemianopsia, though probably this is more common than is generally supposed. The six other cases were practically cases of pure hemianopsia, *i.e.*, there were no paralytic or sensory symptoms or aphasia indicating extensive cerebral disease.

In the first category the lesion is probably placed on the outer edge of the thalamus, so as to involve the fasciculus opticus and the posterior division of the internal capsule. In the second category the lesion is quite certainly farther back, or in the white matter of the occipital lobes. In two cases of the second category marked and increasing weakness of both legs was present—a symptom perhaps due to the upward and forward extension of a tumor toward the paracentral lobule. A very peculiar symptom in two cases of the second category, and one which the author thinks is new, was the occurrence of hallucinatory images for a short time in the darkened half-field. This is a symptom of irritation, and analogous to the convulsive movements which sometimes precede paralysis of a limb when its motor centre is being destroyed by disease.

A very puzzling point is the perfection of central vision in these and other cases of central hemianopsia. The vertical line always passes by the point of fixation, no matter on which side the blindness is. We must conclude that the macula is not involved in the loss of function, and the question arises can the macula have a double enervation from the visual centre? This point the author intends to study thoroughly.

The speaker also exhibited specimens illustrating the seat of lesion in certain cases of hemianopsia.

Dr. Henry Formad exhibited specimens of kidneys demonstrating some peculiarities of cyanotic induration of those organs. This condition is produced by anything which interferes with the circulation through the kidneys. The shape of the kidney where the cyanotic induration results from the use of alcohol is rounded and shortened. The kidney presents a pig-back appearance. Where the cyanotic induration results from heart disease the shape of the organ is not altered, as the condition takes place gradually.

The following papers were read by title: "Notes of a Case of Hepatico-Bronchial Fistula," by Dr. J. E. Graham, Toronto; "Pancreatic Hemorrhage as a Cause of Sudden Death," by Dr. F. W. Draper, of Boston; "Pernicious Anæmia," by Dr. A. Jacobi, of New York; "A

Case of Hodgkin's Disease," by Dr. F. Forsheimer, of Cincinnati.

A vote of thanks was tendered the Government officers and the profession of Washington for courtesies extended.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 17, 1886.

CHARLES CARROLL LEE, M.D., VICE-PRESIDENT, IN THE CHAIR.

DR. A. B. JUDSON, Statistical Secretary, announced the death of

HORACE PUTNAM FARNHAM, M.D.

DR. W. M. POLK then read a paper (see p. 1) on

ALEXANDER'S OPERATION, AND ITS APPLICATION TO UTERINE DISPLACEMENTS.

The discussion was opened by DR. J. B. HUNTER, who regarded the operation as one yet on trial, and concerning which argument was not of much avail unless it could be supplemented by clinical experience, such as had been given by Dr. Polk. He thought there was no question that the operation had a future, and that there were certain cases in which it was a suitable one to perform. To say that it was suitable in only certain cases was only to say that which was true of every operation.

The real question was, whether it gave any advantage over other methods of treatment. He had operated in three cases, and had had opportunity to examine the patients very recently, and had found the uterus firmly "moored behind the symphysis pubis," as Dr. Alexander had expressed it. Dr. Hunter agreed with Dr. Polk as to the cases in which it was advisable; that is, where the uterus was prolapsed, and where it was uncertain whether by the perineal operation it could be kept in position. He thought no one would attempt to perform the operation where adhesions to any considerable extent were present. It seemed to him that in those cases in which the uterus was retroverted with prolapsus of the ovaries, and where no form of pessary could be tolerated, the operation gave a certain amount of advantage over any other procedure which could be resorted to. He thought, however, that there was a certain amount of risk of the occurrence of peritonitis. Three cases of death had been reported, one occurring in this city, but he thought that with careful antiseptic precautions the operation could be regarded as a reasonably safe one. He also regarded it as no more dangerous than the operation for lacerated cervix, and that it was no more difficult to perform. In one of his cases the ligament was so small that he could not at first believe that it would answer for the purposes of traction. But as it was drawn out it grew larger and larger, and proved to be abundantly firm to moor the uterus. He had found less trouble, so far as finding the ligament was concerned, in cases in which there was a large amount of fat than in lean patients. As to whether the operation was efficacious, time would be required to form any intelligent opinion. One year, at least, must elapse before it could be decided whether or not the operation had been successful. He had made it a point to keep the patient in bed four weeks and to use a pessary. He preferred the use of the bone drainage-tube. In all of his cases union has taken place rapidly. He believed that in all suitable cases where other means did not offer good prospect of cure that the operation was advisable, and he should continue to perform it until he was satisfied of its value or the reverse.

DR. W. T. LUSK said that he had had but little experience in the performance of this operation. So far he had been an observer chiefly, with the additional fact that at first he was somewhat sceptical concerning the advisability of the operation, but at the same time not so prejudiced but that he could be convinced of its utility. He had been favored by Dr. Polk with the opportunity of seeing several of his operations, and had watched the cases with a great deal of interest. He only arose to say that he had been completely converted to the operation, and he believed that it was destined to do a great deal of good to *working-women*. He regarded it as an operation only moderately difficult to perform, and that ordinary anatomical knowledge should serve one in attempting it. With proper precautions the operation should not be attended with any danger. True, there had been serious cases, but it had seemed to him that the accidents which had followed the operation should have been avoided. The operation was not extremely difficult; it was reasonably safe, and the dangers which had followed were not inherent in the operation itself. The question then arose, Was it necessary? Dr. Lusk's answer to this question was that pessaries would not enable us to get all the results desirable in the class of cases to which the operation was applicable, and that these results might be obtained by the operation. Pessaries might be well enough for the rich, who could have housekeepers, nurses, and carriages, but they were not sufficient for the successful treatment of women belonging to the working class. If relief could not be afforded to the latter class of patients, they were in a sad condition indeed, and many of them were so afflicted that they went from one hospital to another, or went home, and, being unable to perform their household duties, became the subjects of the abuse which so frequently occurred among the lower classes. If any operation could be devised which would place these unfortunate women on a level approximating that of their more fortunate sisters, it was of immense importance, and it seemed to him that Alexander's operation would relieve a great many of them, and he should hereafter attempt to give the benefit of the operation to those poor women.

There was one point which it was difficult to decide, and that was the result of the operation on pregnancy. That is to say, was it not possible to so shorten the ligaments as to draw the uterus forward to such an extent as would interfere with the patient passing safely through her confinement? Dr. Alexander had reported two cases in which the women had passed through pregnancy and labor safely after his operation had been performed; but more cases were needed to enable us to decide this point.

DR. H. J. BOLDT had not had any experience in the performance of the operation upon the living subject, but he had encountered some difficulty in securing the round ligaments when operating upon the cadaver. From his experience simply in operating upon the dead subject he thought it important to make traction sufficient to bring the uterus into its normal position rather than to rely upon the sound in the uterus for that purpose. Although Dr. Alexander had reported cases in which women had done well during labor aftert he performance of his operation, Dr. Boldt regarded the effect which the position of the uterus might have upon labor as an important question.

DR. LEE had operated in three cases in private practice. All the operations had been performed within the last eighteen months, and all the patients belonged to the middle class. The results had ultimately been good, although in one an abscess formed which gave him a good deal of trouble. In another case he had to resort, after the first week, to the use of a pessary. But in all three patients the uterus had remained in place up to within one month or six weeks.

With reference to the causes which led to the performance of the operation, there was no procidentia in either case. In each instance there was simply an incomplete retroversion or retroflexion without adhesion, attended with such a degree of tenderness that a pessary could not be tolerated, and there was no difficulty attending the performance of the operation. He certainly thought, in common with Dr. Hunter and Dr. Lusk, that the opera-

tion had a great future in the class of cases described and limited by Dr. Polk in his paper.

Dr. Polk, in closing the discussion, referred to a note which he had received from Dr. Jacobus, who had examined one of the women upon whom he had operated, and had reported to him that the uterus was in as bad a position as it was before the operation. Dr. Polk said it was very evident that the patient to whom Dr. Jacobus referred was one in whom he found adhesions, and to whom he had already referred in his paper. It was one case in which the result had not been so favorable as could be desired, but he did not pretend to say that, in every case, Alexander's operation would be successful. He only claimed that in the majority of instances it would succeed.

The Academy then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 20 to June 26, 1886.

Perin, Glover, Colonel and Assistant Surgeon-General. Granted leave of absence for one month, with permission to apply for one month extension. S. O. 54, Department of Dakota, June 14, 1886.

Brooks, John, Major and Surgeon. Ordered for duty as Post Surgeon, Fort McHenry, Baltimore, Md. S. O. 67, Division of the Atlantic, June 23, 1886.

Dewitt, Calvin, Major and Surgeon. Ordered for duty in Department of Dakota. S. O. 142, A. G. O., June 21, 1886.

Gardiner, John de B. W., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Newport Barracks, Newport, Ky. S. O. 67, Division of the Atlantic, June 23, 1886.

Gibson, Robert J., Captain and Assistant Surgeon. Granted leave of absence for thirty-five days. S. O. 43, Division of the Pacific, June 14, 1886.

Official List of Changes in the Medical Corps of the United States Navy during the week ending June 26, 1886.

Beardsley, Grove S., Medical Inspector. Detached from the Navy Yard, Norfolk, and ordered to the Brooklyn.

Bright, G. A., Surgeon. Detached from the Brooklyn and ordered to Navy Yard, Norfolk.

The Ethics of Journalism.—A medical journal of Paris has issued a circular, addressed to physicians practising at various watering-places in France, in which it offers, for a consideration of one hundred francs, to insert their names each week during the season in a special department entitled: "Thermal Stations of France, Season of 1886." The names of those physicians only who pay the fee will be printed in connection with the description of their special stations. A number of the other Parisian journals have united in a public protest against this action on the part of their esteemed contemporary.

Discontinuance of a Journal.—With the issue of April 3, 1886, the *Revue Médicale* has suspended publication. This action was caused by the death of the editor, Dr. Edouard Fournier, the family not wishing the publication to continue under other hands. Dr. Fournier left two sons, and the hope is expressed that they will, in a short time, resume the pen laid down by their father.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 26, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 26, 1886.....	0	6	33	5	55	70	3	0
Deaths.								
June 26, 1886.....	0	0	5	5	8	27	0	0

The Question of Operation in Congenital Torticollis.—Dr. B. E. Hadra, of Austin, Tex., sends a reply to the criticism made by Dr. Brooks upon his article on "Congenital Torticollis." He says that when speaking of cicatricial tissue, and then of fibrous degeneration, he claims to be in accord with the present teaching, which regards the former as a certain stage of the latter; and that by degeneration of muscle he means an increase in the fibrous tissue at the expense of the muscular fibres which become atrophied. He does not deny that there are cases of congenital torticollis which may be cured without cutting, but maintains that there are some which demand the knife, and quotes Bouchut that "myotomy is indicated, though orthopædic treatment will often suffice, but the former is preferable, and always surer in results." Dr. Hadra continues: "Dr. Brooks further tries to frighten the surgeon by the dangers of such operations, and advises them to operate rather on a six-months child than on a six-weeks-old baby. But surgeons know that there is no danger in such operations, and that it makes no difference whatever whether the child be six months or six weeks old. Still, being of a pacific temperament, I am willing to compromise. I am willing to concede that waiting for a reasonable time would be good policy, if, otherwise, circumstances allow it, because we might not be able to make out positively the nature of such cases. In that I am yielding to the aggressive doctor, though I am satisfied that cases like mine will never get well without the use of the knife. I have seen some cases of torticollis in later life, and they were of such nature, and should have been operated upon in early infancy. For illustration, I have now in mind the case of a thirteen-year-old boy who was born with torticollis, as the parents testify, and who is disfigured yet, in spite of a protracted emollient and orthopædic treatment. In conclusion, I would state that there was an error in my article (January 23d, page 91), the word 'not' having been misplaced. The sentence should read: 'That the fibrous degeneration was *not* limited to the point of rupture, but extended over the whole,' etc."

Chorea of the Larynx.—Professor P. Masucci, after describing two cases of this affection, recently observed by him, writes of the two theories at the present time in vogue to explain its occurrence. Massei thinks that chorea of the larynx is due to increased reflex sensibility of the larynx, while Schrötter looks upon it as a pure neurosis. The latter opinion is shared by most authorities. As regards the treatment, the author obtained rapid and permanent results from the use of the galvanic current alone. In this strange affection many remedies have been found efficacious at one time and utterly useless at another, so that it is impossible to decide upon the precise pathogenesis from the results of treatment.—*Rivista Clinica dell' Università di Napoli*, April, 1886.

The Medical Record

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Original Articles.

TWO CASES OF MYXŒDEMA, WITH REMARKS ON THE PATHOLOGY OF THE DISEASE.

BY A. BRAYTON BALL, M.D.,

PHYSICIAN TO ST. LUKE'S AND BELLEVUE HOSPITALS, NEW YORK.

So few cases of this remarkable affection have been reported in this country (I have collected reports of only eleven[1]) that the following two cases, occurring in my own practice, may not be without interest. The first has been under observation for twelve years, the other for only the past eight months.

Mrs. B——, married, aged forty-eight, Jewess. Her father died in 1880, aged seventy-three, of myxœdema of more than ten years duration, terminating in cardiac and Bright's disease. Dr. Schwedler, of this city, his family physician, informs me that the symptoms were of a typical myxœdematous character. An older sister of my patient also died of myxœdema in 1884, aged fifty-two, with renal symptoms. Dr. Mark Blumenthal, her physician, informs me that in her case the disease ran a comparatively rapid course. Five years before her death she had a small goitre, which disappeared within a few months, and was soon followed by well-marked myxœdema. Albumen was not found in the urine until eighteen months before her death; then serious œdema of the lower limbs developed, with ascites, accompanied by a certain amount of relief from the myxœdematous symptoms, as has often been noticed in other cases of this disease when serious effusions take place. In my patient also, Mrs. B——, there is a history of preceding goitre following the birth of her first child, in 1860. Under treatment the tumor subsided within a few months. Between 1860 and 1871 she gave birth to seven children. In 1873 her menstruation ceased, and remained absent for three years, then returned at irregular intervals for eighteen months, and disappeared finally in 1877, at the age of thirty-seven. In 1879—menstruation having ceased entirely for nearly three years—she became pregnant, and was delivered of a healthy child after an easy labor, and without subsequent complications. In 1873, without assignable cause, except perhaps the rapidly recurring pregnancies, she became very anæmic. She came under my care in 1874, and from that time until 1881 was regarded as a puzzling case of obstinate anæmia. The development of myxœdematous symptoms was very gradual; the order of development being first general anæmia, then solid infiltration of the skin, followed by sluggishness of bodily movements and mental functions. Her present condition is as follows:

The face has a cretinoid appearance. It is enlarged in all dimensions, especially in its transverse diameter. The cretinoid effect is enhanced by the apparently small size of the forehead, where the skin is less swollen. On the cheek and rest of the face the skin is waxy and translucent. Each cheek presents a bright pink flush, sharply defined and bounded above by the inferior border of the lower eyelids. Friction increases the size of the patch, and renders it more vivid. The eyelids, especially the lower, are swollen, baggy, and wrinkled transversely. The palpebral fissure is diminished in size; the eyes consequently appear small and farther apart than is normal. The nose is thickened and broadened; the lips swollen, especially the lower one, which is pendulous, everted, and of a violet hue. The mouth is wide·ed. There is an excessive flow of saliva, especially at night upon the pillow, but this symptom is less marked now than formerly. The tumefaction and stiffness of the face obliterate its natural curves and lines, and give it an expressionless, mask-like appearance. On the body and limbs the skin is everywhere swollen, harsh, scaly, and does not pit on pressure, except on the lower part of the legs, where there is some serous œdema. The hands are thickened, broadened, "spade-like;" the nails brittle and incurvated. At times a rapid increase of the cutaneous œdema takes place, producing an uncomfortable sensation of being hide-bound, and accompanied by a marked diminution in the amount of urine. After a few days profuse discharge of pale urine occur and the body perceptibly diminishes in size, with relief to the feeling of tension. For the past year these attacks have recurred less frequently.

On each side of the neck, in the posterior triangles, are bolsters of fat, such as are found in sporadic cretinism, and as were regarded by Hilton Fagge as a constant accompaniment of that disease. At the back of the neck is a considerable deposit of fat, but no definite tumor; large deposits are present also on the breasts and abdomen, the latter especially. The hair on the scalp is scanty, dry, brittle; the eyebrows have almost disappeared, and there is no hair on the axillæ or pubes. During the past year there has been a slight growth of new hair on the scalp, a point of some interest in connection with a diminution of the swelling of the hands during the same period, as showing that the mucinoid stage of the disease is probably now declining. Two congenital moles on the face have grown considerably within the past few years; on the outer aspect of the right forearm are several deeply pigmented moles of recent appearance. The skin of the forehead presents a brownish-yellow discoloration, resembling the pigmentation seen in Addison's disease. This pigmentation was noticed among the early symptoms, before she came under my care, and led to the diagnosis of Addison's disease by a prominent physician of this city. The tongue is swollen, the mucous membrane of the mouth pale, the soft palate, uvula, and pharynx thickened and relaxed. Her voice is hoarse, guttural, without intonation, and nasal in quality, as if she were suffering from enlarged tonsils. She speaks slowly and with deliberation, but under emotional excitement her manner of talking becomes at times quite natural. When she begins to talk, swallowing movements are often noticed, induced probably by the swollen and dependent uvula. Several times daily, with increasing frequency during the past year, she has attacks of aphonia, beginning and ending suddenly, which are occasioned by mental excitement, fatigue, or prolonged conversation. These attacks are accompanied occasionally by choking sensations, and even alarming dyspnœa. Aphonia and dyspnœa can be produced at any time by moderate pressure upon the trachea, which is apparently diminished

[1] W. A. Hammond, one case (Neurological Contributions, New York, 1881, vol. i., No. 3, p. 36); E. M. Cushier, one case (Archives of Medicine, New York, 1882, vol. viii., No. 3, p. 203); A. McL. Hamilton, two cases (MEDICAL RECORD, New York, 1882, vol. ii., p. 645); Journal of Nervous and Mental Disease, Chicago, 1885, p. 180); J. W. Holland, one case (American Practitioner, Louisville, Ky., 1882, xxvi. p. 129); J. A. Robinson, one case (Chicago Medical Journal and Examiner, 1883, xlvii., p. 467); Josiah Roberts, one case (The Planet, New York, 1883, p. 86); Robert T. Edes, two cases (Boston Medical and Surgical Journal, 1884, cx., p. 385); E. G. West, one case (Boston Medical and Surgical Journal, 1884, cxi., p. 50); O. F. Wadsworth, one case (Boston Medical and Surgical Journal, 1885, cxii., p. 5.

in size, and is certainly more flexible upon pressure than is normal. This abnormal flexibility of the trachea, and the production of dyspnœa by a very moderate pressure, was noticed by Professor Kocher in his cases of cachexia strumipriva, to be considered later. No trace of the thyroid gland can be felt in front of the trachea, but the neck is too much swollen to justify a positive opinion as to the size of the gland.

On the part of the muscular system there is some paresis, but less than would be expected from her gait, which is slow, uncertain, waddling; she readily stumbles, and sometimes falls to the ground. The flexors and extensors of the limbs fail to show marked loss of power; there is no static ataxia. The difficulty in walking seems to be caused rather by lack of harmony in the action of opposing groups of muscles. The nuchal muscles are particularly weak, allowing the head to fall forward upon the chest. There is no apparent muscular atrophy; on the contrary, the muscles appear to be fully developed. The knee-jerk is well preserved; the superficial reflexes weak. Tactile sensation good, and not perceptibly delayed in transmission. No cutaneous anæsthesia, general or local, such as is commonly observed in myxœdema, but rather a noticeable amount of hyperæsthesia. All bodily movements are sluggish. The act of dressing takes up a good part of her morning, and many of her household duties have been given up because she has not time for them. Parallel with the muscular lethargy is the condition of mental functions. With the exception of slight impairment of memory, there is little loss of intellectual capacity, but her mind acts slowly; she is slow in apprehension and expression. The mental process, though retarded, is, however, in the end performed correctly. She is easily annoyed by trifles, and irritable in temper, conditions which are the opposite of her natural disposition. Sight and hearing are both impaired, especially the latter. There is no perversion of taste or smell. Her sleep is often disturbed by unpleasant or frightful dreams. All the vital processes are carried on in a sluggish manner. The pulse is slow, with low arterial tension; heart's action feeble, impulse not felt, but no murmur is audible. The excretion of urea is diminished, averaging but little more than half the normal amount. The urine is pale, of low specific gravity (1.010 to 1.015), lessened in quantity—except during the periods of profuse diuresis before mentioned—and hitherto, at repeated examinations, has never contained albumen or casts. Liver and spleen not perceptibly enlarged. The temperature of the body ranges from 95° to 98°, rarely reaching the latter point; she consequently suffers from exposure to cold, and is worse in winter than in summer. At present her disease seems to be in a comparatively stationary condition.

The second case is strikingly similar to the one just described. C. R——, male, aged fifty-nine, Jew. No family history of myxœdema or of special nervous disease; no personal history of mental shock or anxiety. In 1873 he had a severe attack of intermittent fever; shortly afterward symptoms of myxœdema manifested themselves, and have progressed steadily up to the present time. He now presents the typical symptoms of the disease: swollen face, puffy, wrinkled eyelids, pink cheeks, broadened nose, thick lips, spade-like hands, general solid infiltration of the skin, supraclavicular and suboccipital bolsters of fat; slow, waddling, uncertain gait; peculiar deliberation and nasal intonation of speech. With the exception of a scanty beard the loss of hair is almost complete. The hairs of his head can be numbered without difficulty, as there are none left except a few scattered ones on the vertex and occiput. The baldness is so complete that he is obliged to wear a wig. The scalp is deeply pigmented, of a tawny color, parchment-like, seamed with creases, resembling a piece of tanned leather. Three congenital moles, one on the forehead, one on the right cheek, and another on the tip of the nose, have grown considerably within the past few years, and are now as large as a pea. Six others, smaller in size, have made their appearance on the face, and a few, still smaller, on the scalp. Half of his teeth are gone, the rest badly decayed and loose in their sockets. The thyroid gland cannot be felt in front of the trachea. There is no history of a previous enlargement of the gland. The submaxillary gland is much enlarged on both sides. Saliva dribbles upon the pillow at night, but less now than formerly. As in the previous case, the trachea is unusually small and flexible, and moderate pressure produces marked dyspnœa. Smell and taste not impaired. Dr. Charles S. Bull has kindly examined his eyes and ears, and sends me the following report:

"*Eyes.*—Right eye: Secondary converging squint following paresis of external rectus occurring in childhood. Some œdema of ocular conjunctiva in both eyes. Irides rather sluggish in action; small arcus senilis in corneæ; media clear; no sign of either retinitis, neuritis, or atrophy of the optic nerve. Refraction hypermetrophic in both eyes; vision has always been defective in the right eye, and is normal in the left eye. The veins in the retina of both eyes are somewhat engorged, but no more than is seen in normal eyes.

"*Ears.*—Auditory canals somewhat narrowed from thickening of cutaneous lining; epidermis scaly; drum-membranes sunken, thickened, opaque, and inelastic; uvula long and flabby; mucous membrane of the naso-pharynx thickened, hyperæmic, and secreting a rather tenacious mucus; watch not heard in either ear, even when placed against mastoid, squamous, or frontal bones; tuning-fork not heard at all when placed in vibration against frontal or mastoid bones, but patient *says* he hears it faintly when made to vibrate strongly, and held immediately in front of meatus.

"*Diagnosis.*—1. Chronic catarrhal (proliferous) disease of middle ears. 2. Chronic degenerative disease of some part of the acoustic nerve, which may be either primary or secondary to disease of the middle ear.

"CHARLES S. BULL."

He has much difficulty in walking, and requires the help of a cane; but the impairment seems to be chiefly ataxic, as he retains considerable muscular power in all his limbs. Knee-jerk present; superficial reflexes lost; slight anæsthesia of hands and legs. Tactile sensation delayed. Memory perfect about business matters and events of early life, but unimportant recent occurrences he forgets more readily than formerly. He is despondent, irritable, easily annoyed by trifles, and keenly mortified by his personal appearance, which attracts much attention on the street. His handwriting is unchanged, but he writes very slowly. He plays the organ with nearly his former skill, but the clumsiness of his fingers prevents the execution of rapid movements. His wife assures me that she observes no diminution of his mental capacity. In conversation the shrewdness and aptness of his remarks are very noticeable, but talking with him is excessively tedious on account of his provoking slowness. A like torpor affects also his intestinal movements. They require the daily stimulus of a purgative, and even with its assistance a whole hour has to be devoted to the water-closet. Heart's action feeble; no murmur; no increase of arterial tension. His urine, since he has been under my care, has always been free from albumen or casts. Liver, spleen, and lungs present no signs of disease. The bodily temperature is subnormal, and frequently lower upon one side of the body than upon the other; at the last examination it was 96° in the mouth, 95.8° in the right axilla, 96.6° in the left. During the past year he has become more helpless, but in other respects there has been little change.

A few points of special interest in these two cases may be noted:

Heredity.—In the case of Mrs. B—— there is a clear history of both direct and collateral heredity. I have found but one similar case reported, that of Dr. Ord, who says he has seen two daughters who were myx-

œdematous like their mother. Dr. Saville[1] and Dr. Francis Taylor[2] have each reported a case of direct heredity. Several reports mention that one of the parents had died of Bright's disease, and possibly some of these deaths may have been due to myxœdema terminating with renal symptoms.

Influence of sex.—When Sir William Gull first called attention to this disease in 1873, by an article "On a Cretinoid State Supervening in Women in Adult Life,"[3] all of the cases he reported were of the female sex. Dr. Ord's cases, up to October, 1879, six in number, were also females. Of the fifteen cases reported by Dr. Morvan, of Lanniles, in Basse Bretagne, France, in 1881,[4] fourteen were female, one male. As recently as 1882, myxœdema in men was regarded as rare, but since then a considerable number in the male sex have been reported. I have collected reports of 121 cases of myxœdema, and find that of this number 101 were women, 20 men, the proportion of the latter being, therefore, about twenty per cent.

Size of the thyroid and submaxillary glands.—No mention is made of the condition of the thyroid gland in 67 out of the 121 collated cases. Of the remaining 54, in 2 cases slight enlargement is reported, in 7 normal size, in 14 marked diminution in size, and in 31 it is mentioned that the organ could not be felt. Examination of the thyroid in myxœdematous subjects is usually unsatisfactory, owing to the thickness of the tissues of the neck; still there seems to be a very general agreement as to the presence of thyroid atrophy during life, while at autopsies this condition has been always found. In my first patient, and also in her sister, the myxœdematous symptoms were preceded by a temporary enlargement of the gland. Similar cases have been reported by others. A history of exophthalmic goitre has been noted occasionally. In my second case the submaxillary glands were much swollen. I have not seen this symptom reported in other cases; nor, so far as I can learn, has the condition of these glands been examined *post mortem*. Mr. Horsley found hypertrophy of the submaxillary gland in all his cases of thyroidectomy in monkeys.

Condition of mental functions.—Neither of my patients, it will be observed, presented any marked disturbance of the psychic functions. A number of cases have been reported, however, of more serious cerebral lesions, as shown by hallucinations, melancholia, aggressive mania, and imbecility.

For most of our knowledge of the characteristic lesions of this affection, as well as for the name by which it is generally known—myxœdema (μύξα, mucus)—we are indebted to Dr. Wm. M. Ord, of London.[5] The lesions found at his first autopsy[6] were briefly as follows: In the skin marked increase of the fibrillar element of the connective tissue; the nuclear element highly developed and the nuclei enlarged. The interstitial spaces in the connective tissue were large, and filled with "an excess of the mucin-yielding interfibrillar cement." Portions of the skin showed fifty times the normal amount of mucin. Increase of connective tissue was found also in the adventitia of the arteries in the liver, separating the cells from one another and producing atrophy in them, and in the heart inducing attenuation of its muscular elements. The cerebral arteries were extremely degenerated and atheromatous, as were also the great arteries, especially the carotid. No microscopical examination was made of the central nervous system. The kidneys were granular, with thickening of minute arteries and atheroma of renal arteries. The thyroid gland was atrophied; its alveoli compressed, and almost annihilated by the connective-tissue growth around the vessels.

The resemblance of the swollen connective tissue to that of the umbilical cord led Dr. Ord to adopt the view that the essential lesion of myxœdema was a reversion of this tissue to its embryonic state. His views upon this point have since changed, and he now regards the marked development of the nuclear element as indicating that the lesion is rather one of imperfect development.[1] The distinction may not be of much importance, but it is proper that his more mature views should be stated.

The characteristic muscular and mental lethargy of myxœdema was ascribed by Dr. Ord to "the condition of the skin interfering with the natural exposure of the nerve-ends to stimuli." The padding of the peripheral nerves and touch-corpuscles by myxœdematous tissue impedes, he supposes, the transmission of external impressions, and induces inertia of the nerve-centres. But well-marked myxœdema of the skin and sluggishness of movements and mental functions may co-exist in the same patient without noticeable interference with transmission of cutaneous impressions, as in my first case, in which there was no retardation of tactile sensation, but rather a hyperæsthetic condition of the skin. Again, as Dr. Goodhart has pointed out,[2] there is no reason to suppose that in adult life, after the nerve-centres are fully developed, the abolition of a special sense can do appreciable harm to the intellectual faculties. Certainly no such result follows deafness, blindness, or anæsthetic leprosy. Dr. Ord, after discovering lesions of the central nervous system in his third autopsy,[3] conceded that the same changes which occur in the skin certainly exist also in the nerve-centres, and are quite sufficient to account for the nervous symptoms.

In a paper read before the Association Française pour l'Avancement des Sciences, in 1882, Dr. Henri Henrot gives the results of a careful investigation of the nerve-lesions found in a case of myxœdema.[4] In addition to the cutaneous and visceral lesions described by Dr. Ord, he found mucinoid degeneration of the pneumogastric and glossopharyngeal nerves, of the brachial plexus, especially of the ganglia and cord of the great sympathetic, with enlargement of the pituitary body and pineal gland, and concludes that myxœdema is characterized by a return of the subcutaneous, submucous, and interstitial connective tissue to its embryonic state, and by the formation of mucin under the influence of the enlarged pituitary body and pineal gland, which preside over this function.

In a case, with autopsy, reported by Dr. E. M. Cushier,[5] which had presented marked paresis of lower limbs during life, important changes were found in the spinal cord. The walls of the small vessels were thickened and infiltrated with a transparent homogeneous substance. In portions of the lumbar cord, in Clark's columns, and in the lower cervical region, slight hemorrhages were observed. Sections from the lumbar cord showed here and there complete "yellow degeneration" of cells in both anterior and posterior horns, also atrophy of the cells, and absence or diminution of their processes. Similar changes were found, but to a less extent, in the dorsal and cervical regions. "The thyroid gland was smaller than usual, especially the left lobe. The latter had undergone cystic degeneration. The right lobe was of unusually firm texture." On microscopical examination the walls of the alveoli were seen to be thickened, and their contents had entirely disappeared or were replaced by a homogeneous substance.

Lesions of the sympathetic system have been noted in

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[1] British Medical Journal, 1885, ii., p. 916. [2] Lancet, 1882, i., 107.
[3] Transactions of the Clinical Society, London, 1874, p. 180.
[4] Contribution à l'étude du Myxœdème. Gazette Hebdom. de Médecine et de Chirurgie, Paris, 1881, pp. 542, 573, 590.
[5] In France the term "cachexie pachydermique," suggested by Charcot, has been preferred by several writers, but "myxœdema" is now generally adopted in all countries, notwithstanding the objection that excess of mucin is not an essential symptom, as it is not found in all cases.
[6] On Myxœdema, a Term proposed to be applied to an Essential Condition occurring in the Cretinoid Affection occasionally observed in Middle-aged Women (Medico-Chirurgical Transactions, 1878, p. 57).

[1] Lancet, 1882, i., 107.
[2] J. F. Goodhart: Sporadic Cretinism and Myxœdema, Medical Times and Gazette, London, 1880, i., 474.
[3] Transactions of the Clinical Society, vol. xiii., p. 15. London, 1880.
[4] Afterward published as a monograph: Des Lésions anatomiques et de la Nature du Myxœdème, Reims, 1883. Reviewed in Progrès Médical, No. 37, 1883.
[5] Archives of Medicine, vol. viii., No. 3, p. 203, New York, 1882.

a number of autopsies. Dr. John Harley,[1] in one case, found the thoracic ganglia deeply implicated in the adherent and degenerated pleuræ. On the left side the ganglia could not be distinguished. Dr. W. M. Hadden, of London, who is a strong advocate of the view that the essential pathology of myxœdema is a lesion of the peripheral sympathetic system, or of its supreme centre in the medulla oblongata,[2] reports that in two cases examined by Dr. Goodhart and himself an alteration resembling sclerosis was found in the cervical sympathetic. "The ganglia were very fibrous, the nerve-tubes degenerated and atrophied, but the cells not apparently affected." In a third case the semi-lunar ganglia were swollen, very firm, and apparently sclerosed. Sclerotic and degenerative changes were observed also in the thyroid gland in all of his cases, but the earliest changes, he maintains, are external to the alveoli, and the organ becomes atrophied secondarily. He admits, however, that thyroid lesion is a constant fact in the morbid anatomy of myxœdema.

Although thyroid changes are invariably found in myxœdema, they are by no means always accompanied by important lesion of the sympathetic. In a recent autopsy by Dr. W. Hale White[3] the thyroid was very small and atrophic. "There was little or no proper thyroid structure left; a few bodies, evidently the remains of vesicles, are to be seen, and in one or two instances just a trace of the epithelial lining still remains. These degenerate vesicles are filled with small epithelial cells, which have been apparently produced by the multiplication of the proper epithelial lining. . . . The whole organ has undergone extreme simple degeneration." Sections were examined from the right middle cervical ganglion of the sympathetic, right superior cervical ganglion, right cervical sympathetic nerve, left superior cervical ganglion, and the semilunar ganglion. In the section from the right middle cervical ganglion "the cells were abundant, very few pigmented; in many a distinct nucleus and nucleolus are visible. Considering how cells may vary in ganglia which we have no reason to think abnormal, these cells appear very healthy; it is true that some are blurred and have no distinct nucleus, but this is not more so than is often the case. The connective tissue has the degenerate, ill-defined, sodden appearance already described; the result of this is that it is pressed on the nerve-cells so as to reduce the size of the capsule, and in several instances the connective tissue is brought in such close contact with the cell that the line of demarcation is not very evident. Here and there this condition obscures the nerve-fibres. There is no small-cell proliferation." In all the other sections the connective-tissue changes were less marked; more nuclei were seen, and the nerve-cells were healthy in appearance. The slight changes found in the sympathetic Dr. White regards as the result, and a not very important result, of the thyroid atrophy.

This brings us to the question as to the function of the thyroid gland; whether it be of such a nature that its abolition is capable of initiating the remarkable series of morbid changes found in myxœdœma? Physiologists have long suspected that this body possesses important glandular functions. Its relatively large size during the period of bodily development—its proportion to the weight of the body during infancy being that of 1 to 240 or 400; in adult life, 1 to 1,800—and the structure of the organ seem to point in this direction. Its vascular supply is so large that "the sum of the sectional area of its arteries is more than half that of the cerebral arteries, while the lymphatics form huge lacunar spaces immediately outside the margin of the alveoli" (Horsley). The acini are lined with epithelium, at first columnar, later cubical, are surrounded with a rich capillary network, and are filled with a homogeneous or finely granular colloid material, identical with that found in the lymphatics of the gland. Berthelot has shown that the blood in the thyroid vein has a very different composition from that in the jugular vein (the former containing 8.81 to 10.92 per cent. less blood-corpuscles and more fluid ingredients than the latter), and Baber[1] has further shown that this colloid material is largely formed by destruction of the red corpuscles, which are found in the vesicles in all stages of disintegration. From this fact he infers that the thyroid gland exerts a general influence upon the composition of the blood. Simon, Schiff, and others have concluded, from experiments on the lower animals, that the gland secretes something which modifies the nutrition of the nervous system, especially the brain. Let us now see what light is thrown upon the subject by the results of thyroidectomy.

Cachexia strumipriva.—In 1883 Professor Kocher, of Berne, Switzerland, reported eighteen cases in which symptoms closely resembling those of myxœdema followed complete removal of the thyroid gland for goitre.[2] His attention was first drawn to the matter by a remark of Dr. Reverdin, of Genf, that two of his operations for goitre had been followed by diminution of mental capacity. Shortly afterward Professor Kocher saw one of his own patients, from whom he had removed the entire gland in 1874, and the remarkable changes which had resulted in her induced him to investigate the condition of all the other goitrous patients upon whom he had operated, 101 in all. It was found that none of the partial operations, that is, operations in which one lobe alone, or one lobe with the isthmus, had been removed, were followed by cretinoid symptoms. Of the 34 total excisions 3 had died from the operation; 2, after healing, had died from unknown causes, and in 1 the cancerous goitre had reappeared. No news was received from 4. Six sent a written account of their condition; 4 of them were said to be in good health, but little value was attached to these reports, as careful examination might have detected incipient symptoms; in the case of the other 2, symptoms were mentioned which corresponded with those observed on personal inspection in the other cases of complete excision. Of the 18 patients with total excision who presented themselves for examination only 2 had remained well; in 1 of them a small accessory thyroid had developed, and in the other the goitre had returned. The remaining 16 all presented serious disturbances of health, the symptoms being more marked in proportion to the time that had elapsed since the operation, and relatively more marked also in those operated on during the period of growth. To the group of symptoms observed in these cases Kocher gave the name cachexia strumipriva (struma-goitre).[3]

The symptoms developed, as a rule, immediately after leaving the hospital, but sometimes only after four or five months. They began in the form of lassitude, weakness, and pains in the limbs, followed by sensations of coldness in the extremities. In winter, especially, the hands and feet became swollen, bluish, and cold, and chilblains were of frequent occurrence. Diminution of mental capacity, with slowness of thought and speech, was also noticed, particularly in the children who were attending school. Ciphering was especially difficult for them, and in recitation they showed so much deliberation and delay in their answers that in some cases the teacher had been obliged to abandon their further education. Some of the pa-

[1] Proc. of the Royal Med. and Chir. Soc., London, 1884. vol. i., No. 6.
[2] Le Progrès Médical, Paris, 1880, viii., 603–625; Transactions Clinical Society, London, 1881, 58; Brain, 1882, v. 188; Compte-Rendu des Travaux de la Section de Médecine, Congrès International Périodique des Sciences Médicales (1884), Copenhagen, 1886, p. 61.
[3] Transactions Clinical Society, London, 1885, p. 159.

[1] E. C. Baber: Philosoph. Transactions Royal Society, London, 1876, 1881.
[2] Ueber Kropfexstirpation und ihre Folgen, Arch. f. klin. Chirurgie, 1883, Bd. xxix., p. 254.
[3] At the time of writing his article, Professor Kocher seems to have been unaware of the existence of such a disease as myxœdema: at least he makes no reference to the cases of this disease reported in England and France. Spontaneous myxœdema in adults in Germany and Switzerland must be very rare, if one can judge from the absence of reported cases in these countries. Moebius, in Schmidt's Jahrbücher (1883, Bd. 198, s. 35), inquires whether the disease occurs only in England and Latin countries, or whether it has been merely overlooked in Germany. Since that date I have been unable to find a single case reported n German journals.

tients, who had been servants, had been compelled to give up their situations on account of their slowness in speech and movements

In the advanced cases the skin of the whole body was swollen. This change began as temporary fluctuating swellings of the face, hands, and feet, lasting for a few hours, particularly in the morning, most marked in the eyelids, and after some time became permanent. When it was fully developed the face was broadened, the lids swollen and translucent, as in some cases of Bright's disease, the nose and lips thick, and the hands, legs, ankles, and feet enlarged. The body became stouter, especially in the region of the lower thorax and abdomen. The skin was infiltrated, hard, dry, and on the body hung in folds. In two cases there was marked alopecia. In advanced cases the skin and visible mucous membranes were markedly anæmic. The pulse was small, thready, easily compressible; the heart-sounds clear, weak, and the second aortic, still more the second pulmonary sound, accentuated. On examination of the blood all the cases showed marked diminution of the red corpuscles, with relative increase of the white, but no changes in their size or form. Aside from the sluggishness of the mental functions there were few cerebral symptoms. Faintness and headache were occasionally noticed. In one case paroxysms of severe cramp occurred four months after the operation, followed later by epileptic attacks with loss of consciousness. All the cases were examined ophthalmoscopically by Professor Pflüger, but even in the cases of advanced cachexia nothing was observed except a remarkable narrowness of the arteries — no hemorrhages such as are found in progressive pernicious anæmia. The muscles of the limbs, even in those who complained most of weakness and had been obliged to give up work, were so well developed as to remind one of pseudo-muscular hypertrophy. Pulmonary symptoms were not observed, nor albuminuria, except a trace of albumin in one instance. Some of the patients complained of dysphagia, and had difficulty in swallowing dry bread and solid food. Choking sensations in the neck were of more frequent occurrence. In these persons the trachea was more flexible and softer than natural, and apparently atrophied; moderate pressure upon the trachea produced marked dyspnœa. No tracheal atrophy was observed when only a part of the gland had been removed, except slight softening in a few cases on the side of operation. The softening and atrophy were thought by Professor Kocher to be due to ligation of the thyroid arteries in the operation, the trachea deriving its main supply of blood from the inferior thyroid arteries.

Since the publication of Kocher's 18 cases of cachexia strumipriva, 17 more have been reported: Five by J. L. and A. Reverdin,[1] 4 by Baumgärtner,[2] 2 by Julliard, 3 by Professor Bruns, of Tübingen,[3] and 3 by Professor Gussenbauer, of Prague,[4] making, with Kocher's cases, a total of 35; 23 females, and 12 males. One of Professor Brun's cases was of extreme interest, as showing that when the thyroid is completely removed during childhood, bodily and mental development is arrested, just as in sporadic and endemic cretinism. The patient was a young man, aged twenty-eight, from whom, eighteen years before, a goitrous thyroid had been removed by Dr. P. Sick, of Stuttgart. Six months after the operation Dr. Sick had noticed a marked change in his mental condition: "Before the operation he was a bright, cheerful boy; now he is remarkably quiet, reticent, and takes almost no part in the sports of his playfellows; on the other hand, in regard to his ability and willingness to learn in school, and to help his parents in their work, there is no change at all."

Seventeen years later, when Professor Bruns examined him, his condition was as follows: The boyish but plump body is surmounted by the beardless head of a man. The total length of the body is only 127 ctm. (4 feet 1½ inch). While the head is of normal size for his age, his height is that of a boy ten years old. The trunk and extremities are well proportioned to each other. The whole face, particularly the lips and lower eyelids, is much swelled, and idiotic in expression; the skin and visible mucous membranes pallid. The skin of the whole body is dry, scurfy, and thickened by a peculiar brawny infiltration. The hair on the head is very scanty; there is no trace of a beard, and only a few hairs are present on the pubes. The genital organs are well developed. Speech is slow, and evidently impeded by swelling of the tongue, gums, and tonsils. The thyroid gland is absent; larynx and trachea normal; respiration free; heart's action weak. No enlargement of spleen or increase of white blood-corpuscles.

Another characteristic symptom is well developed. While the sensibility of the skin and coarse muscular strength are well preserved, the patient cannot perform the lightest work, and can scarcely walk fifty steps. This muscular incapacity has been complete for several years; when he left school, at fourteen years of age, he was unable to learn a trade or work in the fields, but applied himself industriously to knitting; but a few years later he was obliged to give up that occupation also. There is marked loss of mental capacity. While the boy, before and immediately after the operation, was an excellent scholar, he is now less developed than a child of ten years, his apprehension of ideas is sluggish, and his answers to very simple questions are correct, but very slow. His manner is sober, quiet, but never foolish. Sight and hearing are both defective.

Results of thyroidectomy in the lower animals.—Zesas, in experiments upon dogs and cats, found that after complete removal of the gland the animals remained well for a few weeks, then became drowsy, lost their appetite, staggered in walking, and finally died of convulsions and paralysis. Schiff found in dogs and cats that thyroidectomy was followed by death in from four to twenty-seven days. The symptoms produced were fibrillar contractions of muscles of the extremities and body, attacks of tonic and clonic convulsions, disturbances of sensibility, apathy, somnolence, and death. That the fatal result was not due to lesion of the recurrent nerves, the cervical sympathetic and vagus, was shown by the absence of the characteristic symptoms when the gland was merely exposed, and the thyroid branches of the recurrent and superior laryngeal nerves divided. Similar results were obtained also by J. Wagner. In his experiments no disturbances ensued after partial excision of the gland.

The symptoms following thyroidectomy in the lower animals have recently been restudied by Victor Horsley Brown, Professor of Pathology in the University of London.[1] The operations were performed with strict antiseptic precautions, and with special care to avoid injury to the recurrent laryngeal nerve. In monkeys the symptoms were, briefly, as follows: "At a variable period after the operation, but averaging about five days, the animal is found to have lost its appetite for a day or two, and on closer examination to exhibit constant fibrillar tremor, in the muscles of the face and hands and feet more especially. These tremors disappear at once on voluntary effort. At the same time the animal is noticed to be growing pale and thin, in spite of the appetite returning quickly with great increase; rapidly the tremors increase, affect all the muscles of the body without exception; the animal becomes languid, paretic in its movements, and imbecile. The puffiness of the eyelids and swelling of the abdomen follow, with increasing hebetude. During the last stages the temperature, gradually falling, becomes subnormal, and the tremors gradually disappear as they came. Meanwhile the pallor of the skin often becomes intense; and leucocytosis having become well

[1] Du Myxœdème par extirpation de la thyroid. Geneva, 1883.
[2] Langenbeck's Archives für klin. Chirurgie, Bd. xxxi., 1 Heft., p. 119.
[3] Ueber den gegenwärtigen Stand der Kropfbehandlung, Sammlung klin. Vorträge (Volkmann's), No. 244.
[4] Reported by E. Pietrzikowski, Prager Med. Wochenschrift, 1884, s. 470; 885, p. 5.

[1] British Medical Journal, 1885, i., pp. 111, 221.

marked, oligæmia follows, and the animal dies perfectly comatose in a variable period, but usually about five or seven weeks after the operation."

Sensation was found to be affected only in the advanced paroxysmal stage, and then in the form of slight anæsthesia. The superficial reflexes were diminished, the knee jerk was always well marked, except when prevented by muscular rigidity. The spinal lumbar centres acted normally; no permanent bulbar symptoms, but occasionally transient dysphagia and dyspnœa. Disturbances of the higher cerebral functions were observed in the form of listlessness, irritability of temper, increasing hebetude, and finally partial or complete imbecility. On the part of the circulatory system there were lowered arterial tension, diminution of the red and increase of the white corpuscles, and the presence in the blood of a small amount of mucin. The salivary glands were much enlarged. The submaxillary glands secreted a large amount of mucin, the parotid a less quantity. The secretion of mucin by the latter is worthy of note, because normally the parotid secretion is serous and contains no mucin. The urine never contained albumin, but in some cases there was a transient glycosuria. The skin was very pale, but not dry. The lower eyelids were swelled, the palpebral fissure diminished one-half, and the whole face of the animal presented an appearance similar to that of myxœdema in the human subject.

At the autopsy the subcutaneous connective tissue was "swollen, jelly-like, and shining," and contained from three to four times the normal amount of mucin. Everywhere the connective tissue was notably hypertrophied, but especially in the triangles of the neck and over the hypochondria. There was also an atrophy of fat, as seen in wasting diseases. The muscles exhibited no change except increase of their connective tissue, and the same was true of the circulatory system. Marked indications were found of increase of the mucin-formation function of the alimentary canal. The parotid and submaxillary glands were enlarged to three or four times their normal size, and their cut surface exuded a sticky, glairy fluid. Dr. Halliburton made a chemical analysis of the skin and subcutaneous tissue, tendons, parotid and submaxillary glands and blood, and found a marked increase of mucin in all except the blood, which contained only a trace. The mucous membrane of the intestines was swollen in three cases, and semi-translucent in all. The spleen was hypertrophied, but otherwise normal. In the central nervous system no changes were observed to the naked eye, except anæmia and atrophy, but at the time of the report the sections were not ready for examination. Sections of the cervical, sympathetic, and musculo-spiral nerves were quite normal in appearance.

During the past year, in a new series of thyroidectomies in monkeys, Mr. Horsley found that under the influence of a high temperature the life of the animal could be prolonged to five or six months, with modification of the severity of the neurotic symptoms. Directly after the operation the animals were kept in a room at an average temperature of 90°, and as soon as symptoms occurred, were placed in a hot-air bath with a temperature of 105°. Under this treatment the first symptoms did not appear until ten days or longer, and then were less intense. The monkeys survived the stage of mucinoid degeneration, lost their excess of mucin, and passed into an atrophic stage, in which they died of failure of the lower visceral centres. Such a survival of the mucinoid stage is seen not infrequently also in myxœdema, and accounts for the comparatively slight excess of mucin which has been observed occasionally at autopsies of advanced cases of this disease. The influence of cold in increasing, and of an equable climate in ameliorating, the severity of symptoms in myxœdema was observed in the earlier reports of cases. Dr. Morvan, of Lanniles, in Lower Brittany, France, whose report of fifteen cases has been referred to, expressed his surprise at the severity of the disease in England as compared with the mildness of his own cases. Among his patients, all peasants, one had presented symptoms of myxœdema for ten years, another for seventeen years, a third for twenty years, and yet all three were able to attend to household duties, and engage in active farming work. The explanation, he thinks, lies in the comparatively equable climate of the Finistère, where, owing to the proximity of the Gulf Stream, the temperature rarely falls below the freezing-point. The practical bearing of these interesting observations upon the treatment of myxœdema is obvious.

From the histological structure of the thyroid gland, and the results of his experiments, Mr. Horsley draws the following conclusions:

1. "The thyroid gland appears to consist of two distinct portions: (*a*) glandular, consisting of highly vascular acini, which excrete into their interior a mucoid substance, this substance, or something closely similar, being found in the lymph-vessels of the gland—mucin-excreting function; (*b*) highly vascular lymphoid nodules—hæmatogenous function.

2. "Excision of the gland is followed, according to my experiments, by an increase in the amount of mucin in the tissues which normally possess it, by a retrograde histological change, by an increase in the activity of the glands which normally excrete it, and (what is still more striking) by the assumption of the muciparous function by a gland which normally possesses none or very little mucin—by the parotid gland.

3. "Excision of the gland is followed by profound changes in the blood, viz., a diminution in the number of corpuscles, preceded, as regards the white elements, by a temporary increase in their number, by an alteration in the coagulability and albumens, and by an abnormal presence of mucin.

4. "Excision of the gland is followed by nerve symptoms indicating change in the lowest motor centres, these changes causing tremors with rigidity and paresis; it is also followed by changes in the higher psycho-cortical centres, such producing imbecility, and ultimately death in the comatose state."

In a preliminary note published by P. Albertoni and G. Tizzoni, of Bologna, in June, 1885, two interesting observations are reported in connection with their thyroidectomies in dogs.[1] Examination of the blood several days after the operation showed that the arterial blood contained no more oxygen than the venous blood, sometimes even less. Blood taken from the femoral artery of a healthy dog, kept under the same conditions as the dogs experimented upon, contained 17.8 vols. oxygen to 100 vols. of blood, whereas only 8 to 11 vols. oxygen in 100 vols. blood were found in blood taken from the same vessel in dogs from whom the thyroid had been removed. That neither the deficient oxygenation of the blood nor the other symptoms were due to mechanical interference with the respiratory process was shown by the fact that the same results were obtained in dogs who had been tracheotomized after thyroidectomy.

Albertoni and Tizzoni also call attention to a lesion not mentioned by other experimenters, but defer their final opinion as to its significance until they have examined the central nervous system.[2] The lesion is a degeneration of the peripheral nerves, even of those situated at a distance from the site of operation, *e.g.*, the sciatic nerve, limited to certain portions of the nerve-fibres, and resembling the degeneration found after nerve-stretching. It consists of changes in the medullary sheath, destruction of the axis-cylinder, and increase of the protoplasm of the fibres, with multiplication of their nuclei, especially at points where the degeneration is most advanced.

It has been claimed by several writers that the ca-

[1] Ueber die Folgen der Exstirpation der Schilddrüse, Centralblatt für die Med. Wissenschaften, June 13, 1885.

[2] At the present date (June, 1886) I cannot find that their completed report has been published.

chetic symptoms which follow thyroidectomy in man and the lower animals are not due to loss of the gland, but rather to injury to the cervical nerves. Thus Baumgärtner [1] ascribes the result in some cases to direct injury of the recurrent nerve, or the thyroid branches of the cervical sympathetic, in the operation, but more frequently to subsequent lesions in one or both of these nerves, induced by processes of inflammation, adhesion, and cicatrization in surrounding parts. The same view has been adopted by Pietrzikowski in his report of Gussenbauer's cases,[2] and also by Dr. Hadden, Dr. Stokes,[3] and Dr. White.[4] This explanation is unsatisfactory for several reasons. In Horsley's thyroidectomies no lesions were found at the autopsies in the cervical, sympathetic, and musculo-spiral nerves, while during life the only symptoms that could be referred to the recurrent nerve were occasional transient attacks of dyspnœa, but no permanent laryngeal symptoms. Moreover, myxœdematous symptoms have never been observed to follow either the numerous experiments that have been made on the cervical sympathetic, or the removal of large cervical tumors, other than those involving the thyroid gland. But even if we admit that during the operation of thyroidectomy, or subsequently, in consequence of adjacent inflammatory and adhesive processes, local injury is inflicted upon the recurrent nerve, or the cervical sympathetic, it is altogether unlikely that such local injury can lead to the widespread changes in the brain, spinal cord, and sympathetic system that have been found in myxœdema, and are, presumably, present also in advanced cases of cachexia strumipriva. The diffuse character of these changes points, with great probability, to some cause outside of the nervous system, which, directly or indirectly, influences it as a whole, and not to a local nerve-lesion spreading by continuity of tissue.

It remains to consider briefly the condition of the thyroid gland in sporadic and endemic cretinism—affections closely allied to myxœdema in the adult. The most striking peculiarity of cretinism, viz., partial or complete arrest of bodily and mental development, we have already seen may follow thyroidectomy when performed in early life. Furthermore, cretins present most of the characteristic symptoms of myxœdema—the broadened face, full cheeks, thick lips, spade-like hands, nasal intonation and slowness of speech, sluggish movements, and many of them also the mucoid infiltration of the skin. Now, in sporadic cretinism the thyroid atrophy is even more marked than in myxœdema, there being no trace of the gland at the autopsy in some cases, as in those reported by Mr. Curling,[5] Dr. Fletcher Beach,[6] and others. In other cases the gland, though present, is atrophied or extremely degenerated, even a small goitre being exceptional. It is a suggestive fact in this connection that deficiency of the thyroid body, as the result of disease, has never been observed except in connection with cretinism or cretinoid symptoms.

But it will be objected that in *endemic* cretinism, the more common form, goitrous enlargement of the gland is the rule. According to the reports of the Sardinian Commission in 1848, and of the French Commission in 1873,[7] two-thirds of endemic cretins are goitrous. Of the remaining third it is merely stated that they had no goitre, but the exact condition of the gland, whether absent or atrophied, is not mentioned. Dr. Hadden, in his paper on "Myxœdema" at the recent Medical Congress in Copenhagen,[8] asks whether "the goitre of the cretin has the same structure as the goitre of the non-cretin? If so, it is clear that the essential cause of cretinism is not the goitre." No investigation has ever been made, so far as I am aware, as to the comparative amount of thyroid degeneration in the two classes; but there is at least presumptive evidence that the goitre of the cretin is more degenerate than the goitre of the non-cretin. Hilton Fagge [1] has pointed out that, when a family moves into a region where goitre is endemic, goitre first appears, and cretinism does not present itself until the second or third generation. It is a fair inference from this fact that the thyroid gland has become progressively more degenerate in the descendants, and this inference is confirmed by the probable existence of a greater or less degree of atrophy in one-third of the cases.

It is difficult, then, to resist the conclusion that the thyroid gland has important metabolic functions, and that in many cases its loss, either by operative removal or by the slower processes of disease, must seriously impair the general nutrition of the body, especially that of the nervous system. In what order of development the lesions of myxœdema follow the loss of thyroid function we can only conjecture. Possibly, the mucoid infiltration and enormous connective-tissue dystrophy may be determined directly by withdrawal of the part taken in the metabolic processes by the thyroid gland, and the nerve-lesions, in part at least, may be the result of compression by hypertrophied connective tissue. It seems more probable, however, from the symptoms following thyroidectomy, that the loss of thyroid function modifies the nutrition of the nervous system directly. Upon this view the connective-tissue changes may be regarded as a neurotic dystrophy, and the more important symptoms as due to lesions arising from defective nutrition in the brain, medulla, spinal cord, and sympathetic system. But these are points upon which our present knowledge does not warrant positive conclusions. The object of this paper has been accomplished in directing attention to the highly probable, if not conclusive, evidence that in myxœdema the determining factor in the group of lesions is the one which is the most constant and conspicuous, viz., degeneration and atrophy of the glandular elements of the thyroid body.

[1] Loc cit. [2] Loc. cit. [3] British Medical Journal, 1883, ii., 1261.
[4] Lancet, 1884, i., 974.
[5] Medico-Chirurgical Transactions, London, 1850, p. 303.
[6] Pathological Transactions, London, 1874, p. 265.
[7] Baillarger: Enquête sur le Goître et le Crétinisme, 1873. [8] Loc. cit.

SELECTED CASES OF LAPAROTOMY.[1]

By DUDLEY P. ALLEN, M.D.,

VISITING SURGEON TO CHARITY HOSPITAL AND CLEVELAND CITY HOSPITAL.

THE cases of abdominal section presented in this paper have been selected, not to show brilliant results, but rather difficulties encountered in operation. Some of these difficulties have been successfully overcome. Others, though insuperable, have not prevented recovery.

We present five cases: The first was an exploratory incision in a case in which extra-uterine pregnancy seemed the most probable diagnosis; the second, an interstitial fibroid; the third, an unusually adherent ovarian tumor; the fourth, a double ovarian tumor; the fifth, a dermoid cyst. Four of the cases recovered, one died. The cases will be detailed very briefly, and only the prominent features dwelt upon.

The first case was the patient of Dr. H. J. Lee, of Cleveland, and was seen in consultation with him and Dr. W. J. Scott. The patient, Mrs. D——, aged thirty-three, had been married eight years, she miscarried once seven years ago, and had one child, two years of age, living. Her previous health had been good, and she had suffered from no uterine disease.

Early in April, 1885, she menstruated; not menstruating in May, and experiencing considerable nausea, together with the sensations of her previous pregnancy, she supposed herself pregnant. About June 1st, while in church, she had quite a severe hemorrhage. She was carried home, but bled little after her arrival, but says a little fleshy material came away, though she retained nothing looking like a fœtus.

[1] Medico-Chirurgical Transactions, 1871.
[1] Read before the Ohio State Medical Association, June 3, 1885.

She was admitted to Charity Hospital, July 14th. Since the time of her supposed miscarriage the patient had suffered from continued abdominal pain and occasional bloody discharge from the uterus, and after entering the hospital had a fever varying from 99° to 101°. She had had two physicians, both of whom considered the case to be a miscarriage. She was anæmic and somewhat emaciated. Examination per vaginam showed a patulous os, with the uterus slightly deflected to the left, having a depth of three inches. In the right iliac region, equally distant between the cæcum and the uterus, was a spherical, semi-fluctuating mass to be felt, both externally and per vaginam. This was somewhat tender on pressure.

Previous to my seeing the case the interior of the uterus had been explored by Dr. Lee, and found empty. The diagnosis was between a malignant or inflammatory disease of the cæcum, a cyst, a local peritonitis, and extra-uterine pregnancy. The latter was considered most probable. Nearly four months having elapsed since menstruation, the most favorable time for the destruction of the fœtus by electricity had passed. The propriety of the application of electricity was, however, carefully considered, but the condition of the patient was such as to make the delay necessary for its application and the determination of its success or failure seem unwarrantable. An exploratory incision was determined upon, and was made August 6th. An aspirating needle was plunged through the wall of the vagina into the tumor, to see if any information could be gained by this means; only a drachm of clear fluid was obtained. An incision was then made parallel to and one inch above Poupart's ligament, extending from the anterior-superior spinous process of the ileum on the right side to the outer border of the rectus muscle. The peritoneal cavity being opened, an adherent mass was found filling the length of the incision. Dense, heavy bands of adhesion extended from this toward the right side of the uterus, and included the fimbriated extremity of the tube, but neither uterus, ovary, nor the tube proper were involved in the mass.

These adhesions were divided between ligatures. A persistent effort was made to reach the centre of the mass by separating the adhesions which surrounded it, tearing them away successively from the superior, inferior, and internal surface, but all these efforts were unsuccessful. Nothing save an extensive destruction of adhesions was accomplished. Further operative interference being denied, unadvisably the abdomen was closed. The diagnosis remained undetermined between abdominal pregnancy, malignant or inflammatory disease of the cæcum with adhesions, and a local peritonitis. Within a few days after operation the patient's fever ceased, and she made an uninterrupted recovery. At the present time the patient is in perfect health, and only a small mass can be felt where the oval tumor formerly existed.

The question of diagnosis was at the time, and is now, uncertain. The recovery of the patient excludes, however, malignant disease; a cyst was excluded by aspiration. A salpingitis or oöphoritis, with pelvic cellulitis arising therefrom, was excluded by the fact that neither uterus nor appendages were included in the adherent mass. That it was simply inflammatory seems improbable, from the fact that the immediate effect of the operation was to reduce the temperature, which soon became normal; that the pain, which had been constant, disappeared, and that the mass, which had been steadily increasing, at once began to decrease in size. If the case were one of extra-uterine pregnancy the effect of the operation was to break down adhesions, destroy the vascular supply, and thus prevent the further development of the fœtus. The insertion of the trocar would have the same tendency.

The question of diagnosis and operation, in cases of extra-uterine pregnancy, is an unusually difficult one, both because cases do not present themselves for examination until perhaps the membranes have ruptured and hemorrhage occurred, and also because the determination of the positive existence of extra-uterine pregnancy is sometimes well-nigh impossible. Should even a probable diagnosis be made, it would seem that the question of some operative interference should be seriously considered. This is demonstrated by a specimen which we present to you of ruptured tubal pregnancy at the fourth month, resulting in death. Could this have been diagnosticated, operation would have been easy, and a cure reasonably certain. The specimen shows the fœtus surrounded by amniotic fluid and membranes, with the portion of the tube occupied by the placenta ruptured. Death followed the rupture in about ten minutes. There were absolutely no adhesions, and at the post-mortem only the tube had to be divided to remove the fœtus.

Case II.—Mrs. P——, aged thirty-seven, married, general health good, had been troubled for over a year with difficulty in micturition.

Should she go without micturition for more than one to two hours it became impossible, and catheterization had to be resorted to.

The case was under the charge of Dr. F. J. Weed, and was seen in consultation with him and Dr. H. K. Cushing. The catamenia recurred every three weeks or a little more, and were of late excessive. Examination showed the uterus to have in its wall a dense tumor, firmly wedged into the pelvis so that it could not be moved. The sound entered the uterus four and a half inches. The fundus could be felt above the pubis. In order to relieve the difficulty in micturition, an effort was made to lift the uterus out of the pelvis by means of an inflated colpeurynter. This was continued three days, but produced pain, tenderness, and a temperature of 101°, so it seemed best to remove it. It was then thought possible that the fibroid which bulged into the uterus might be removed through the vagina. Being firmly surrounded by the pelvis, it seemed that by dilating the cervix, and using ergot, and applying pressure from above, the tumor might be crowded downward, since it could go in no other direction.

Treatment by fl. ext. ergot was continued during four weeks. It was administered hypodermatically, by mouth and by rectum, and caused slight decrease in the size of the tumor. Administration by rectum of one drachm night and morning was most efficient and caused least disturbance.

Since the progress was not satisfactory, July 2d, four weeks after entrance to hospital, the patient was etherized, and the cervix was incised bilaterally up to the vagino-cervical junction, and the cervix was dilated as widely as possible with a large Sims dilator. The cavity of the uterus was explored with the finger, and the fibroid did not bulge into the cavity sufficiently to warrant an attempt at immediate enucleation. With this incision, and dilatation of the cervix, it was hoped that by the use of ergot and pressure externally upon the fundus the fibroid might be forced downward. The patient's temperature did not go above 98.8°, and the tumor bulged downward a little, but not sufficiently to warrant an operation for its removal per vaginam. About three weeks after operation the patient went home. Passage of urine had become normal. The tumor was considerably diminished in size, and the loss of blood was less. In November the patient was seen again, in consultation with Drs. Weed and Cushing. Of late there had been considerable increase in size of tumor, and the menstrual periods had recurred about once in three weeks, and the loss of blood was excessive. It was decided that the patient's only chance for health, and almost for life, was to remove both tubes and ovaries. Accordingly, on November 3d, the abdomen was opened. To do this was extremely difficult, for the bladder was found spread out over the front of the tumor, reaching half way from the pubis to the umbilicus, the peritoneum being reflected

horizontally from the abdominal wall to the top of the tumor above the fundus of the bladder. Only one ovary could be felt, and both ovaries and tubes were so impacted in the pelvis that their removal was utterly impossible. The only thing remaining was to close the abdominal incision, which was a complicated procedure. The patient progressed satisfactorily until eleven days after operation, when the left leg was found to be largely swollen. The swelling continued, and the leg was somewhat painful, presenting every appearance of a thrombosis of the iliac vessels. The swelling of the leg gradually decreased, and the patient made a good recovery, leaving the hospital December 18th. At present the patient is in better health and flesh than for a long time. Her menstrual periods have recurred at from four to seven weeks, being much less frequent and severe than formerly. Micturition is normal. The patient says that if she did not know about the tumor, she would be unconscious of its presence. The fibroid is much smaller than at the time of the operation, as evinced by its greatly increased mobility. The history of the case would seem to indicate that the abdominal incision resulted in a thrombosis of the uterine plexus of vessels, which extended to the iliac vessels, thus causing the swelling of the left leg.

The history of the case gives rise to two questions. Has the decrease in size of the tumor been caused by the thrombosis of the uterine plexus of vessels, or has the simple incision produced a change in nutrition, of a sort not fully understood, but well-recognized in its influence upon various diseased abdominal conditions?

Case III.—Mrs. P——, aged thirty-five, married, entered the hospital in March, 1885, the patient of Dr. G. C. Ashmun. She had been visited by several gentlemen, and the case had at first been considered one of pregnancy. She was seen the last of March in consultation with Drs. Ashmun and W. J. Scott. The patient was greatly emaciated, being so thin that she was obliged to lie lengthwise upon a pillow. She sat up a short time each day, but could not walk. She ate almost nothing. Her pain was so intense that she had one grain of morphine hypodermatically every night. The abdomen was very prominent, and so tense as to look like parchment. The pulse before operation ranged at about one hundred. All agreed upon a diagnosis of ovarian tumor, and that though an operation offered the only chance for life, the case was wellnigh hopeless from the condition of the patient, and the probability of extensive adhesions. There was great fear lest the patient should die on the table.

The operation was performed April 2, 1885. The tumor was adherent to the abdominal wall over its entire anterior surface, but these adhesions were not difficult to separate. The whole superior surface was closely adherent to the omentum, and this had to be divided between successive ligatures. The posterior surface was adherent to the small intestine, and at least one yard of gut was removed from the cyst by slowly tearing between thumb and fingers the adhesions. There were also adhesions to the pelvis on both sides, and the pedicle, which was not over one inch long, was adherent to the pelvis on the left side, and to the sigmoid flexure. To tie it was the most difficult part of the operation, and when tied it was not less than one and a half inch in diameter. The bleeding was excessive, being most abundant from the intestines and mesentery. A large number of vessels were tied with catgut, but since the hemorrhage still continued from the intestines and mesentery, at the suggestion of Dr. Mellikin towels were wrung out in hot water and repeatedly inserted deeply into the abdomen, beneath the bleeding intestines. This controlled the hemorrhage. The time occupied in the operation was two hours and ten minutes, and the difficulties overcome were extreme. The patient was in a state of collapse when put to bed, and it was thought in the night she was dying. She was kept up with artificial heat, subcutaneous injections of brandy and enemeta of brandy, beef-tea, and laudunum. She improved slowly, sitting up in bed three weeks from the day of the operation, and made a good recovery. The case has been related as one which recovered under the most adverse circumstances, and also to show a method of stopping a general oozing of blood in the abdominal cavity, by the application of towels wrung out in hot water. Though this is a common method in other locations its advantages have not perhaps been sufficiently recognized in hemorrhages deep in the abdomen. Having employed it on various other occasions we can commend it as a valuable and safe procedure.

Case IV.—Miss G——, aged twenty-six, slender; noticed a growth in her abdomen in July, 1885. This increased gradually. The case was under the charge of Dr. H. J. Lee, and was seen, in consultation with him and Dr. W. J. Scott, October 27th. The case seemed to be one of simple ovarian cyst, probably without adhesions. It was operated on October 29th. One cyst, which weighed eight pounds, was easily removed. After its removal, a second cyst, about three inches in diameter, was found to involve the other ovary. This lay on the floor of the pelvis, being thick and dense. To remove this cyst it was necessary to ligate, and divide into two portions the broad ligament. The cyst had its point of attachment to the right and posterior surface of the uterus, almost down to the utero-vaginal junction. The only thing to mark the operation was the weakness of the patient's pulse. This had averaged ninety before the operation, and became very feeble. The pulse, which was 112 the evening of the operation, gradually increased until, on the fourth day, it was 142. The day before a slight discharge had appeared from the vagina, resembling that of menstruation. The temperature had reached 103.2°. The chief difficulty, however, seemed to be the weakness and feebleness of the pulse. The tympanites was only moderate. It became evident that without some relief the patient must die.

Since the vaginal discharge made the presence of some septic process seem possible, the only indication was to relieve this. Accordingly, a vaginal douche was given, and the lowest stitch in the abdominal wound was removed, and a Kerth drainage-tube carried down to the bottom of Douglas' pouch. Not more than two teaspoonfuls of bloody serum were obtained. One quart of a solution of thymol, 1 to 1,000, at a temperature of 99°, was then injected into, and again removed from, the abdominal cavity. The patient endured all this without ether, and said it caused only a little smarting. There was no exhaustion, and patient was, if anything, more comfortable after than before the operation. The urine, which had been scanty, measured, at next catheterization, nearly one pint. The patient gradually failed, the pulse growing more rapid and feeble, and she died about four and a half days from the time of the operation. The autopsy was performed about twelve hours later. There was considerable tympanites. No fluid was found in the abdominal cavity, nor the slightest sign of any inflammation. There were only nominal adhesions to the points where the tissues had been divided. The uterus, which was removed entire, and which is presented to you, shows the ligatures intact and the uterus in a normal condition. The kidneys were examined, but nothing abnormal could be discovered in the appearance of the abdominal viscera or cavity. No signs of sepsis could be found. We were not permitted to open the thorax. It would have been interesting to have examined the heart, to see if a clot had caused the weakness of its action. Its failure had been out of proportion to the gravity of other symptoms, and has produced the conviction that the weakness of its action was a leading factor in the outcome of the case. Examination of the point of attachment of the right ovary will show the difficulty of its removal. The case is interesting as demonstrating that what would seem a simple case before oper-

ation, may possess unseen elements of difficulty, and result fatally.

Case V.—Mrs. C——, aged twenty-seven, married, in excellent general condition, was operated upon October 22, 1885. The case was seen in consultation with Drs. H. K. Cushing and W. J. Scott. An ovoid mass was found to the right of the uterus, semi-fluctuating, and was thought to be separate from the uterus. Its nature was not determined. It was removed without any unusual incidents. On being opened it was found to be a dermoid cyst, containing about one and a half pints, made up of sebaceous material and hair. Attached to the wall was a piece of bone, and upon this were growing two well-formed teeth. You may be interested to see it. The convalescence proceeded remarkably well, with the exception of one complication. A week after operation the patient developed a universal and very severe bronchitis. Careful treatment was followed by marked improvement after twelve hours, and after twenty-four hours the danger was past, and the patient made an uninterrupted recovery.

The foregoing cases have all been performed with the strictest precautions with regard to cleanliness and antisepsis. Carbolic acid and bichloride of mercury have been used, great care being exercised that none should enter the abdominal cavity.

They have been reported to show, first, the difficulty of diagnosis in extra-uterine pregnancy; second, to record the presence of an unusually developed bladder, greatly endangering operation; third, to record the benefits following an exploratory incision in a case of uterine fibroid with excessive hemorrhage; fourth, to record the successful removal of an ovarian tumor with almost universal adhesions; fifth, to emphasize a desirable method of controlling excessive bleeding deep in the abdominal cavity, by means of cloths wrung out in hot water; sixth, to show that the weakness of the heart may prove a serious complication after ovariotomy.

A NEW VAGINAL IRRIGATOR.

By JOHN W. GORDON, M.D.,

PLYMOUTH, ME.

Recumbent position of the patient, long-continued application of copious injection fluids of high temperature, such, in brief, are the more essential factors in successful vaginal irrigation, as evinced by the clinical experience of the modern gynecologist; and it is to be borne in mind that the external female genitals will not bear contact with that high degree of heat which is well tolerated by the vaginal canal and cervix uteri, and which is demanded in the management of various pathological states of the pelvic viscera.

The many vexatious inconveniences which attend the measures usually employed in private practice for administering vaginal irrigation often disgust or discourage the patient, and thus in many instances absolutely bar a continuation of the process, more especially when injection fluids of the highest requisite temperature are ordered; while the inefficiency of such measures, even when faithfully carried out as far as practicable, so detracts from the just and possible results of this invaluable method of medication as to frequently disappoint the expectations of the physician and patient alike.

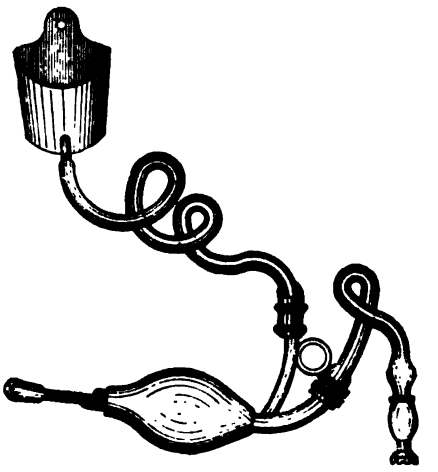
An instrument has been recently constructed for the purpose of wholly relieving patients of such inconveniences and discomfort as well as for greatly enhancing the efficiency of this method of treatment, and the unique device is being used with most gratifying results.

The instrument consists of an injection-tube, which may be attached to, and operated by, all kinds of syringes—the ordinary rubber-bulb, alpha, fountain, or hydrant. This injection-tube is surrounded—a portion of its length—by a larger tube, which supplies means of ample drainage. Surrounding the intra-vaginal portion of the drainage-tube, and attached thereto, is a hollow, soft rubber bulb or tampon, conical in form, elastic and compressible, which, when the instrument is inserted within the vagina, gently and perfectly occludes the orifice of that canal, thus preventing the surplus injection fluid from escaping therefrom otherwise than through the drainage-tube, which communicates with a receptacle which is placed on the floor at the side of the bed or couch.

Thus, while this elastic and compressible tampon affords absolute immunity from leakage, it also, by means of the inclosed air-chamber, protects the sensitive vulva and perineum from undue contact with heat, thereby enabling the patient to make use of injection fluids at the highest requisite degree of temperature with entire impunity during the most lengthened period of irrigation.

Patients—without the aid or presence of an attendant—conveniently and willingly operate the instrument in an efficient manner while occupying every variety of the recumbent position; indeed, all desirable postures are equally available, and no accessories whatever are required.

By virtue of the peculiar mechanism of this device and the simplicity of its operation the user easily controls the mechanical action of the injection fluids employed. Thus by simply compressing the drainage-tube between the finger and the exterior of the ring by which the instrument is held in place—thereby obstructing the outflow—the vaginal canal may, whenever advisable, be distended to the fullest extent by the gentle means of equable hydrostatic pressure, by which manœuvre the rugæ are thoroughly separated and the irrigating liquid finds direct access to the entire mucous surface of that organ, and may be thus retained indefinitely; while by means of the dependent position of the drainage-tube the injection fluid—obeying the fundamental law of hydraulics—wholly escapes from the vagina ere the instrument is withdrawn from its position at the termination of each period of irrigation; and hence, whatever the posture of the patient, and whatever the properties of the liquid used, perfect cleanliness of person and the avoidance of wetting or soiling clothing or bedding is insured from first to last.



The smallness of the apex of the tampon—five-eighths of an inch in diameter—renders the device no less available to the maid than matron.

The small size of the entire instrument renders it easily kept from the observation of children, as well as from the prying eyes of children of larger growth; while its portability renders it eminently serviceable to those who journey in pursuit of health, "the conventional saturnalia of bucket-blankets, pans, stools, and so forth," being left behind, laid away to be numbered with the lost arts.

Equipped with this irrigator I order systematic and thorough hot vaginal irrigation in the recumbent posture, with full assurance that in every instance my instructions will be promptly and faithfully followed by the patient,

who dispenses with the services of attendants, together with the whole paraphernalia of aids, and in the seclusion of her room secures all the benefits to be derived from the most advanced surgical art as conveniently and in as cleanly a manner as she can make or unmake her accustomed toilet, and feminine æsthetics is no longer outraged.

Progress of Medical Science.

A Method of Removing Foreign Bodies from the Ears.—Mr. Jonathan Hutchinson writes in the *British Medical Journal* concerning a simple method used by him in the extraction of foreign bodies lodged in the external auditory meatus. It consists in the use of a silver wire-loop, instead of either forceps or scoop. He has never, since he was a student, used either of the latter instruments; and, for the purpose of extracting hard bodies from the ear, holds that they are most dangerous. With a flexible silver wire-loop, or if need be, with two placed at right angles, he says he has repeatedly succeeded when all other means had failed. Thus, not only is the loop quite devoid of danger, but it is both more easy of use and far more efficient than any other method. It is impossible that it can injure the membrana tympani, or the walls of the canal. The method of procedure is, after having put the patient under an anæsthetic, to introduce the loop gently into the ear, and turn it about until it is believed to have got behind the foreign body. This it will often do at once; but sometimes a little patience is necessary. In one instance the writer took out a piece of heavy lead in this way with very little trouble, using two loops at right angles with each other. The simplicity, safety, and efficiency of the method make it desirable, he thinks, that it should be better known.

Albuminuria during an Attack of Prurigo.—Dr. Umberto Dieci reports the following case in a reprint from the *Gazzetta degli Ospitali*. A shoemaker, thirty-four years of age, had suffered for nearly his whole life from prurigo of the entire body. At the time of coming under treatment, after an aggravation of the skin affection, he had œdema, beginning in the face and thence spreading over the rest of the body. The urine was found to be albuminous, but this together with the œdema, quickly disappeared under appropriate treatment. Six months later the œdema again appeared, and the patient was received into hospital. At that time the prurigo was marked and the œdema extensive; there was great hypertrophy of the heart, a systolic murmur was audible at the apex, albumin and casts were found in the urine. In the course of a month the cutaneous affection became better, the œdema disappeared, and the urine became normal. The treatment consisted in warm baths and the hypodermatic injection of pilocarpine. No albumin was found in the perspiratory secretion. The writer believed that the kidney affection was secondary to the skin disease.

Collapse after Antipyrin.—Dr. Blore relates the case of a woman who suffered from a fever following abortion. Quinine was first given, and then antipyrin. Of the latter drug a dose of thirty grains was given, and three hours later fifteen grains more. After the second dose she went into a collapse, and died at the end of about thirty hours, in spite of every means employed to excite a reaction. The author believed the fatal collapse was not a result of the disease, but was caused by the rapid fall of temperature induced by the antipyrin.—*Wiener Medizinische Wochenschrift*, No. 15, 1886.

Infantile Atrophy of the Extremities.—This peculiar affection has been observed and described by Charcot and Marie, Ollenburg, Eichhorst, and Joffroy, some thirty cases in all having been reported. The affection begins in the muscles of the feet and legs, affects those of the thigh but never of the trunk. Then there is a pause of several years in the progress of the disease, after which the muscles of the hands and forearms begin to atrophy, but those of the arms, shoulders, and face are never affected. M. Joffroy reported two cases of this nature at a meeting of the Hospitals Medical Society of Paris (*L'Union Médicale*, May 1, 1886). One of these, a young girl, had been in good health up to the age of five, when she had an attack of scarlatina. Seven or eight months after it was noticed that she did not walk very well, the toes turning inward and the child meeting with frequent falls. A diagnosis of talipes equino-varus was made, and tenotomy was performed and an orthopædic apparatus applied. There was no improvement. A little later, examination showed the foot and toes to be motionless, cold, and cyanotic, and chilblains caused much trouble. The patient could stand with difficulty, and stumbled in attempting to walk. All these troubles were developed in the space of one year, and then there was an arrest in the course of the disease for a period of five years. When the girl was eleven years of age, without any apparent cause, the muscles of the upper extremities commenced to atrophy. The hands tired so rapidly during piano exercise that the teacher was the first to notice the trouble. The thenar eminences grew rapidly thin, and soon the atrophic *griffe* was formed by permanent extension of the first phalanx and atrophy of the second and third. At the time of the report the faradic and galvanic contractility had disappeared in the lower extremities, and while some of the muscles of the upper extremities responded faintly to the electrical stimulus, the reaction of degeneration was present. M. Joffroy thinks that the clinical picture of this form of atrophy is sufficiently defined to warrant a distinctive name for the disease. Heredity seems to play an important part in the etiology of the affection, as of the 30 cases recorded up to the present time, 25 were observed by different physicians in members of one family.

A Peculiar Symptom caused by Atropine.—Dr. Rampoldi writes in the *Annali Universali di Medicina e Chirurgia*, that, having a slight conjunctivitis, he instilled into the eye a drop of what he supposed was a solution of zinc sulphate, but what was really a twenty per cent. solution of atropine. He was surprised to feel no smarting. About fifteen minutes later he had the sensation of a dancing white light, apparently just on the borders of the eyelids, which disappeared after a time, and returned whenever the field of vision was disturbed. The same phenomenon was observed in others upon trial with atropine and duboisine.

An Italian Predecessor of Pasteur.—The claim is put forward in a secular journal, *Il Popolo Pisano*, that Dr. Eusebio Valli first made use of inoculations for the prevention of rabies in 1799. In a book upon the "Plague of Constantinople," he gave an account of inoculations of animals with the saliva of a mad dog, modified by admixture with gastric juice. Finding no ill effects resulting from these experiments, he then inoculated the child and the maid of a lady of Pisa, who had been bitten by a rabid dog, and they escaped without any bad symptoms. A similar claim, it will be remembered, was made on behalf of Pacini, concerning the discovery of the comma bacillus. It seems to be the fate of Italians to make discoveries which are at once forgotten, until they are rediscovered by some French or German worker. It would be a patriotic act for some Italian of leisure to ransack the medical literature of his country for the past century or two, and to collect and publish anything which might be suspected to have in it the germ of a great discovery, and thus secure a sort of copyright on it so as to circumvent any adventurous foreigner who might think he had found out something new.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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SUBLIMATE SOLUTIONS AND THEIR DANGERS IN OBSTETRICS AND SURGERY.

THE use of corrosive sublimate in the dressing of wounds is as old as Paracelsus, but its systematic adoption dates back only five years. Davaine in 1873, and Billroth in 1874, showed the germicidal power of the sublimate, and, acting on Davaine's suggestions, Tarnier in 1881 recommended it for disinfecting the hands; while in 1882 he substituted injections of sublimate solutions for those of carbolic acid in the wards of la Maternité. In this same year Schede and Kummel, basing their plan upon the experiments of Koch, applied corrosive sublimate to general surgery, and since the announcement of their results its use has rapidly increased in this country and in Europe.

Up to the beginning of this year the use of corrosive sublimate dressings and of corrosive sublimate as a wash and injection has been reported upon favorably by twenty-three surgeons and physicians, according to Dr. Lucien Butte, who has written an elaborate article upon this subject in *Nouvelles Archives d'Obstétrique et de Gynécologie.* Among obstetricians and gynecologists Schroeder, Hegar, Stegman, of Dresden; Keller, of Bern; Leopold, of Dresden; Toporski, of Breslau, have made favorable reports upon its use. Articles upon this subject are now appearing in a Vienna journal, from Professor Braun. We note a total of 2,078 cases reported, with only 7 intoxications.

Some have stated that since the use of sublimate they have had no more parametritis.

Dr. Butte is not content with this record, however, and he has industriously collected all the instances of mercurial intoxication, fatal or otherwise, which have been reported.

The first discordant note in the concert of eulogium was struck by Dr. Stadfeldt, of Copenhagen, in 1884. In using washes of sublimate 1 to 1,500, he observed, among seven patients, death in one case and diarrhœa with gingivitis in two cases. In the case of death there were bloody stools, and on autopsy characteristic renal lesions were found.

Hofmeier, assistant in Schroeder's clinic at Berlin, has observed three cases of mercurial intoxication, two being fatal. In these cases vaginal irrigations of a 1 to 1,000 solution were used. Vohlz (*Schmidt's Jahrb.*, 1884, No. 3) reports a case of fatal poisoning following an intra-uterine injection of a 1 to 750 solution. Dr. W. Thorn, assistant at the clinic at Halle, has reported two fatal cases, and one non-fatal case of intoxication. In one of the fatal cases vaginal irrigations, in the other intra-uterine injections, of 1 to 1,000 were employed. Keller, of Bern, reports, during the year 1884–85, four non-fatal and one fatal case.

At the Gynecological Society of Berlin, Lower and Veit each reported cases of lacerated perineum which were sewed up, and injections of a 1 to 1,000 solution used. The patients died with sanguinolent diarrhœa. Drs. Müller, of Bern; Netzel, of Stockholm; Partridge and Peabody, of New York, have reported one or more cases of fatal mercurial intoxication.

E. Fraenkel, of Hamburg, among fourteen autopsies made upon Schede's patients (all of whom had been treated with antiseptic dressings), found evidences of toxic irritation of the large intestine in all cases, and in two instances he attributed death to the mercury.

Finally, three fatal cases are reported by Krukenberg and Ribbert, of Bonn; one by Winter, two by Braun, and two by Mickulicz. Besides this long list of fatal cases, Butte has collected reports, from six observers, of several non-fatal cases. Naturally, only a small part of these cases, however, would be likely to be published.

It thus appears that over thirty cases of death have already been recorded from the use of sublimate solutions, either in the form of vaginal or uterine irrigations or in the washing and dressing of wounds.

The clinical symptoms in this form of poisoning are already so well defined that the diagnosis is not difficult. The drug seems to act, as a rule, on the lower part of the bowel, salivation and stomatitis being rarely observed. The patients first have diarrhœa, then soon complain of rectal tenesmus; finally the diarrhœa becomes bloody, fetid, and profuse, with acute rectal and abdominal pains.

In non-fatal cases the mouth is much oftener affected than in those that are fatal. Nausea and vomiting are generally present.

The amount of urine is lessened, albumen and casts, and sometimes mercury, appear in it. The nervous system shows signs of great depression, but intelligence is not impaired.

Post-mortem, the two most marked and characteristic changes are a gangrenous enteritis, and deposits of amorphous masses of oxalate of lime in the kidneys. This latter change is not always present, but when it does occur it is said to be absolutely pathognomonic of mercurial poisoning.

Occasional fatal mercurial poisoning from sublimate washes and dressings is thus established beyond doubt. But it will be noted that in the majority of cases the solutions used were strong, *e.g.*, 1 to 1,000, or even 1 to 750. Such solutions are to be very carefully applied to open surfaces of the human body. With proper precautions sublimate solutions need not be regarded as dangerous. They may have killed tens, but they have saved thousands.

ENTRANCE EXAMINATIONS FOR MEDICAL COLLEGES.

ONE at least of our leading medical colleges has finally arrived at that point of worldly prosperity when it is able to seriously consider the subject of the elevation of the

standard of medical education. It is universally conceded that in the line of such elevation lie entrance examinations and a graded course of instruction. The former is, we think, of more importance, and is the initial step in the whole matter. Given, then, the probability of consummation of this end, so long hoped for in New York, the question arises, what should be the ground covered by such examinations. In other words, what is the ideal preparation for medical study.

We have to guide us in the decision the experience of other institutions, especially those which form an integral part of a university system. At Yale, for instance, the requirements are algebra to quadratics, Euclid two books, the metric system, and elementary physics. The examinations are all conducted in writing, and the papers handed in are regarded as a test of the candidates' attainments in grammar, spelling, and construction. At Harvard the requirements are that "a student shall pass a satisfactory examination in English, Latin, Physics, and some one of the electives, Botany, French, German, elementary algebra, or plane geometry." In both these institutions, as well as in others, where entrance examinations are required, a candidate is excused from competing if he can present a degree in Letters or Science from some recognized literary institution, or a certificate of entrance to some one of the larger colleges.

This whole subject has been quite thoroughly discussed in a recent address before the Massachusetts Medical Society by Dr. Hodges, of Boston. His criticism of the present methods is seen in the following words: Commenting upon the Harvard requirements, he says that if instead of this a knowledge was alone demanded of the comprehension of those principles "which govern the action of living things, and which are the substrata of human anatomy and pathology, a great gain would be made." He asserts that no field offers a wider scope for the application of various accomplishments than does medicine, and that what we need is men of mental energy who have had their preliminary training in those studies which encourage precision, and which lead to the development of our tactile, visual, and auditory senses.

Coincident with this idea are the views recently expressed in England at a meeting of the General Council of Medical Education and Registration. A special committee reported that the subjects for preliminary examination should include elementary mechanics of solids, and that the subject of hydrostatics should also receive attention. Anyone who has seen the average student wrestle with the problem of vascular pressure will not regard the last bit of advice as at all out of place.

Coming to the requirements suitable for a New York school, we should include some knowledge of Latin. This is pre-eminently the language of nomenclature. More recent derivations from other languages can generally be traced back to this one. The requirements in physics and mathematics as expressed in either of the schedules previously mentioned seem to us sufficient. Acquaintance with French or German, while vastly increasing one's acquaintance with the literature of the profession, cannot be regarded as absolutely necessary. Not out of place would be moderate requirements in those sciences which especially involve the doctrines of classification—as botany, natural history, and chemistry. Dr. Hodges places especial emphasis on biology and elementary physiology. They are most valuable preliminaries, and an accurate presentation of their principles necessitates no mean knowledge of English. Of course the requirements could not include simple mechanical drawing, but we regard it as a very decided help to the study of anatomy, and an accomplishment well worthy of cultivation by an aspirant for medical honors.

A NEW HOSPITAL.

We are glad to chronicle the establishment of an institution distinctively for convalescents. A small institution has recently been opened by one of the sisterhoods of the Protestant Episcopal Church, near Stuyvesant Square. It is intended to receive those who are well enough to leave the large general hospitals, but who are not yet able to go to work. Working women needing rest, food, and possibly slight medical attention, will also be admitted. Those who pay for themselves will be charged six dollars per week. The principal support, however, must come from annual subscriptions and donations. An annual subscription entitles the contributor to one letter of admission, available for the current year, which can be given to any eligible patient, and will entitle the latter to a fortnight's stay in the Hospital. The name of the new institution is St. Andrew's Convalescent Hospital, and it is situated on East Sixteenth Street. The house of the sisterhood is at No. 233 East Seventeenth Street.

It is evident to anyone familiar with the hospitals of New York that our great present need is institutions similar to the foregoing. We have accommodation for all acute sickness, but the convalescents would be restored to health much faster if they could be conveyed to sanitariums instead of remaining in hospital. We need also a large institution for phthisis patients. Nearly every hospital now has its quota. They are treated in a routine manner, with cod-liver oil and cough-mixtures, while very little care is taken to study each case individually. A case of phthisis is usually voted a bore unless the chest is a museum of physical signs, when some interest is taken in it. If all these cases, or a large number of them, could be grouped in one institution, a more systematic study could be made of the clinical aspects of the disease. We have nothing in this country at all comparable to the Cousumptives' Home at Brompton, on the other side. Here is another opportunity for the charitably disposed.

CAN SYPHILIS BE TRANSMITTED TO ANIMALS?

One of the chief obstacles in the way of a better comprehension of the nature and pathogenesis of syphilis has hitherto been the impossibility of studying the disease otherwise than as it occurs in the human subject. Numerous attempts have been made to inoculate the lower animals, but without success, as they seem not to be susceptible to the action of the syphilitic virus. This fact has been made use of as an argument by divines and others, who maintain that the disease is a scourge sent to man in punishment for his sins; but it has been a source of discouragement and regret to those who seek to find out rather what syphilis is than why it is.

It is not beyond the range of possibility, however, that we may yet find some animal which shares with us the unenviable susceptibility to this affection. Dr. Sabater y Casals, in an article in the *Gaceta Médica Catalana* of May 15, 1886, says that he has seen two dogs, inoculated with the syphilitic virus, which presented symptoms very closely resembling, if not actually those of, the disease in question. There were the indurated ulcer at the seat of inoculation, the exanthem, the glandular enlargement, and, in one case, an almost unmistakably syphilitic affection of the nail. The differences between the symptoms exhibited by the dogs and those of syphilis in the human subject were only such as might be expected to exist, and as are seen, for instance, in malignant pustule when it attacks different species. Two cases are not sufficient to prove anything, but they serve to suggest the possibility that syphilis may be transmitted to some of the lower animals.

THE MORTALITY AMONG PHYSICIANS.

It is a well-established fact that the mortality among medical men is much above the average of that incident to most occupations. Dr. W. Ogle recently presented some interesting statistics bearing upon this point at a meeting of the Royal Medical and Chirurgical Society of London. He found that the mortality among English physicians for the three years from 1880 to 1882 was 25.53 per mille, while that of barristers was 20.23, and of clergymen 15.93. As might be expected, the infectious diseases found more victims in the medical profession than in other callings. Scarlet fever killed 59 out of a million physicians, while of adults in other pursuits only 16.01 died of this disease. The figures for diphtheria were 59 and 14 respectively, for erysipelas 172 and 136, and for typhoid fever 311 and 238. It is instructive to note, however, that the mortality from smallpox among physicians was many times below the average for non-medical adults, due, without doubt, to the greater care that medical men take to insure perfect protection by repeated vaccination. Pulmonary diseases are apparently less fatal to physicians than to others, for Dr. Ogle found that the number of deaths from this cause was twenty-seven per cent. below the average for the general adult population.

It is rather humiliating to find that deaths from alcoholism are more frequent among the members of the medical profession than among those of other occupations. Suicides are also more frequent, and what is worse, it is stated that medicine is the only calling among the members of which there is a steady yearly increase in the number of cases of self-destruction. It would be interesting to learn the cause of this increase, and whether it is dependent upon overcrowding of the profession and the consequent more bitter struggle for the means of subsistence. We suspect that the prevalence of both suicide and alcoholism may be traced, partly at least, to this cause.

A SPONTANEOUS CURE OF HERNIA.

The radical cure of hernia is a subject which has for centuries engaged the attention of surgeons, and the possibility of which is even yet, despite the great advances made in recent years, doubted by some. Undoubted cures are often obtained by Heaton's and other methods, yet spontaneous cures without operation sometimes occur, and perhaps more frequently than is generally supposed.

Several writers in *L' Union Médicale* have recently reported cases of this kind, some of which were a source of anything but joy and congratulation to the medical attendant. One of these is reported by Dr. L. Michalski. He was called to see a young man, who was said to have strained himself in dancing, and found a rather large inguinal hernia on the left side. He was unable to reduce it on the first trial, and three seances of taxis were required before the intestine was wholly replaced. Excepting this difficulty in reduction, the hernia presented nothing worthy of note, and the patient was dismissed wearing a truss. Two and a half years later the man returned to request a certificate in order that he might be relieved from serving in the army. Dr. Michalski thought a certificate unnecessary, but as he remembered the case well, gave it, neglecting to examine the patient again. At the medical examination, however, it was asserted that the man was sound, and fit for military duty. He then abandoned his truss and served out his term, without having any return of the hernia at the end of ten years.

Such a certificate, given in perfect good faith, might well have brought considerable trouble to the writer had he been unknown to the medical examiners, or had collusion with the conscript been suspected. The case is instructive, showing, as it does, that a hernia may not return after its reduction. And the possibility of such an occurrence should be borne in mind, not only by the surgeon in attendance, but also by those who may see the case afterward, and who may be led unjustly to accuse the former attendant of ignorance or something worse.

THE CAUSE OF CIRRHOSIS OF THE LIVER.

The cause of cirrhosis of the liver, of the common type, is uniformly ascribed to the use of alcohol, and the disease even has the name of gin-drinker's liver. In Germany one-third of the cases are attributed to brandy drinking (Thierfelder), while in England gin and brandy together share the opprobrium of setting up the disease.

While alcohol is always asserted to be the great cause, it is alcohol in the form of strong spirits which is believed to be most mischievous. For this reason the disease is said to be most common in North Germany and England, and less common in wine-drinking countries.

It is possible, however, that we may have to amend in some respects these conventional views as to the origin of cirrhosis of the liver. The disease was well known to the ancients long before distilled liquors were introduced. It occurs to a large extent in women, who comparatively rarely indulge in excesses with distilled liquors. In some years the number of deaths from hepatic cirrhosis, in this city, has been almost equally divided between males and females (105 and 93). The disease in this city has also increased in the past ten years about one-third, *i.e.*, from 0.6 per 1,000 deaths to over 0.9 per 1,000, while the increase in consumption of alcohol has been in the direction of fermented, not distilled, liquors.

In a recent article on "Alcoholic Cirrhosis," by M. Lancereaux, of Paris, who is well known for his studies regarding the effects of alcohol, he makes some statements which are likely to be regarded as heterodox. Alcoholic cirrhosis of the liver, he says, is not increasing in frequency (in France), while alcoholism is doing so. This is because alcoholism is due to the abuse of distilled liquors, cordials, etc. (an abuse which is increasing), while cirrhosis is due to an abuse of wine (an abuse which is not increasing). "Wine," continues M. Lancereaux, "is the most common and, perhaps, the only cause of the cirrhosis of drinkers, in France, at least." The proofs of this are: First, that cirrhosis is relatively frequent in wine-drinking countries, where alcoholism is rare; second, the almost absolute uniformity of a history of vinous excess in cirrhotics.

M. Lancereaux's statistics include 95 cases, all observed with the utmost care. These showed simple excess in the use of wine in 24 cases; excess in the use of wine and brandy, 63 cases; excess in the use of wine and beer, 1 case; excess in the use of wine and cider, 1; excess in the use of brandy, rum, or absinthe, 6.

The amount of wine used daily varied from two to six litres, the average being about three litres. The wine used was generally of a very cheap quality, and was mostly red wine. The other data regarding cirrhosis agree in the main with those of other observers. The age of greatest frequency was between forty and fifty, and there were 18 women to 77 men.

M. Lancereaux's statistics are most interesting in their relation to the subject of causation. His conclusions are certainly weakened by the fact that a large proportion of his cases (sixty-five) indulged excessively not only in wine but in brandy, and he does not say that the latter drink was not, after all, the favorite one. His claim, however, that cirrhosis is most common in wine-drinking countries is certainly worthy of attention, as it is quite opposed to current views. Thus Dr. Bartholomew, in his article upon Cirrhosis of the Liver in Pepper's "System of Medicine," states that the disease is not common in wine-drinking countries. In support of Lancereaux, it must be admitted that French pathologists were among the earliest and most active contributors to our knowledge of this disease.

A REVOLUTION IN THE AFTER-TREATMENT OF CATARACT AND IRIDECTOMY OPERATIONS.

We believe that it is only ophthalmic surgeons who, after operating, submit their patients to the horrors of the dungeon, obliging them, in the language of the contemporaneous drama,

> "To lie in solemn silence in a dark, damp dock."

But there have now arisen certain gentlemen who have the boldness to decry this practice as unnecessary, and even hurtful. At the St. Louis meeting of the American Medical Association, Dr. Michel advocated the plan of using a light bandage to the eyes after cataract operations and iridectomies, and allowing the patients to be in a lighted room, where friends can come and read to them. Dr. Michel's plan was not favorably received at St. Louis, but it has been tried by Dr. Chisolm, of Baltimore, who reports fourteen cataracts and four iridectomies treated in this way. The method in detail is simply this: After the removal of a cataract or the performance of an iridectomy, the eyes if a cataract, the eye if an iridectomy, is closed in its normal position and a bit of isinglass plaster, about two and a half inches long by one inch wide, is then rendered flaccid by immersion in some germicide fluid and is neatly applied to the surface of the closed lids. When dried this forms a close, firm band. The patient is then allowed the full liberty of his room. In every case thus far operated upon by Dr. Chisolm the results have been uniformly good, and he has consequently abandoned the old method.

News of the Week.

The International Medical Congress.—The *British Medical Journal* publishes editorially a letter from an American correspondent, concerning the International Medical Congress. The writer, after giving an account of the trouble, says:

"This democratic spirit has had full play, with the sad effect of alienating a majority of the men who, to an independent onlooker, must be regarded as essentially the representative men of the profession. It is useless for the present organizers of the Congress to comfort themselves with the thought that they have filled the places of the 'irreconcilables' with men equally good for Congress purposes. A comparison of the officers of sections named by the original committee with those finally selected by the present committee affords a most painful contrast; and the notable absence in every section of the men most prominent in American medicine will strike even the casual observer. The great cities of the East, Boston, New York, Philadelphia, and Baltimore, will not be represented scientifically, for, with two or three exceptions, the leaders and workers will hold aloof. Austin Flint, Jr., Lewis Sayre, and Lewis Smith, of New York, are the only men of first rank to represent the East in the present Congress. A list of those who are 'out' will embrace the men best known in Europe as American writers and workers, such as Bigelow, Bowditch (H. J.), Bowditch (H. P.), Holmes, Warren, Chadwick, and Homans, of Boston; Delafield, Draper, Dalton, Loomis, Seguin, Sands, Markoe, Jacobi, Lusk, Barker, and Lefferts, of New York; Stillé, Da Costa, Pepper, Bartholow, Goodell, Gross, Weir Mitchell, Agnew, Ashhurst, Wood, and Leidy, of Philadelphia. It has been a struggle of the West and South against the North and East, and the West and South have won."

Mississippi Valley Medical Society.—A partial programme of the Twelfth Annual Session of this Society, to be held at Quincy, Ill., July 13, 14, and 15, 1886, is as follows: Surgical Treatment of Hypertrophic Nasal Catarrh, W. C. Pipino, M.D., Des Moines, Ia.; A Case of Obstruction of the Bowel, Thomas D. Washburn, M.D., Hillsboro', Ill.; The Discovery of Anæsthetics, H. N. Lyman, M.D., Chicago, Ill.; Albuminuria and Disease of the Kidney, B. M. Griffith, M.D., Springfield, Ill.; Is the Pneumatic Cabinet a Practical Failure? H. J. B. Wright, M.D., Olney, Ill.; The Therapeutics of Bismuth and Asclepia Tuberosa, Amos Sawyer, M.D., Hillsboro', Ill.; Enterocolitis of Children, A. J. Steel, M.D., Charlestown, Ill.; Eti-

ology of Chorea, Frank R. Fry, M.D., St. Louis, Mo.; Neuro-retinitis Albuminurica, William Cheatham, M.D., Louisville, Ky.; Heart Failure, W. W. Fuque, M.D., Memphis, Tenn.; Intestinal Obstruction, J. H. Luckett, M.D., Owensboro', Ky.; Peritonitis, Andrew Seargent, M.D., Hopkinsville, Ky.; Operative Interference in Inflammation of the Knee-joint, A. R. Jenkins, M.D., Henderson, Ky.; Yellow Fever in Brazil, Preventive Vaccination, Frinxe's Method, Personal Observation on the Ground; Beriberi on the Coast of Brazil, Personal Observations, both by Horace M. Lane, M.D., Brazil, S. A.; A paper, by William Porter, M.D., St. Louis, Mo.; Surgical Treatment of Pleuritic Effusions, William A. Byrd, M.D., Quincy, Ill.; Artificial Alimentation, I. N. Love, M.D., St. Louis, Mo. Those in attendance will be returned at one-third fare by showing a certificate of having paid full fare coming. This is not a delegate body, but admits to membership, simply by registration, all practitioners in good standing. A cordial invitation to be present is extended to all members of the profession. Address Joseph Robbins, M.D., Chairman Committee of Arrangements, Quincy, Ill.

A Warning.—The Charity Organization Society begs to suggest to the physicians of New York City great caution in responding to appeals for assistance from one "Dr. Watson," who claims to have been a victim of the "Oregon" disaster. He is apparently near forty years old, tall, has thin face and dark complexion, Irish cast of features, and slight brogue. He exhibits a forged letter and gives a false address. He carries a list of several prominent physicians who appear to have given him sums of money.

The American Association for the Advancement of Science will hold its Thirty-fifth Annual Meeting at Buffalo, N. Y., beginning August 18th.

The Alabama Medical and Surgical Journal is the title of a new medical monthly, edited by Drs. J. D. S. Davis and W. E. B. Davis, of Birmingham, Ala. The first issue contains much interesting material, and shows excellent judgment in its arrangement. We are glad to see new journals starting in the Southern States. They are indispensable in developing the common interests of the medical profession of the States, as witness the good work done in Texas, Florida, and other localities.

Dr. Hunter P. Cooper, of Atlanta, Ga., lately of this city, has been made an adjunct professor of chemistry in the Atlanta Medical College. We congratulate the doctor and the College.

Medical Professorships.—Dr. L. Kirn, Extraordinary Professor in Freiburg, who had been elected by the medical faculty of Dorpat to the Professorship of Psychiatry, with charge of the clinic for mental diseases, has declined the invitation, preferring to remain in Freiburg. This can hardly be considered surprising, says *The Lancet*, if the rule which exists in Russian universities compelling professors to submit their lectures in manuscript to a police official several months before delivery is enforced in Dorpat, or at least in the medical faculty. There is, however, no doubt that professorships in Russian universities are not very comfortable posts at present, and that is the secret of numerous resignations which are so constantly being announced.

There is a Prospect of a new medical college being started at Colfax, Ia.

A Sensational Statement about Perambulators.—A somewhat sensational statement has been arrived at by the medical officer of the rural sanitary district of Hexham, in Northumberland, England, who, in explanation of the fact that 124 out of every 1,000 children in his district die before attaining the age of twelve months, asserts the mortality to arise from exposure of children in perambulators.

American Neurological Association.—The Council of the American Neurological Association announce that the regular business meeting of the Association will be held at Long Branch, N. J., on Wednesday, Thursday, and Friday, July 21, 22, and 23, 1886. Two daily sessions will be held, one in the morning from 10 A.M. to 1 P.M., and one in the afternoon from 3 to 5 P.M. A suitable room has been engaged at the Howland House, where the meeting will be held. A number of interesting papers have already been contributed, thus insuring the success of the meeting.

The International Medical Congress.—A committee of twenty-five members has been appointed in Vienna for the purpose of making arrangements for the forthcoming International Congress to be held here in 1887.

President Cleveland has consented to be one of the patrons of the Congress.

Suppression of Pain in Labor by the Local Application of Cocaine.—Dr. E. L. Partridge, of this city, writes: "Your editorial upon the 'Suppression of Pain in Labor by the Local Application of Cocaine' prompts me to a brief expression of views which, in the main, *dissent* from those quoted and endorsed (though not with great strength) by your journal. My experience is *wholly opposed* to the view that any relief can be obtained by the local use of cocaine previous to the passage of the head from the uterus. My view is based upon hospital observations and those of private practice which I have made. From a theoretical standpoint, I would also differ from the views quoted, calling attention to the fact that the pains of labor, up to the time of complete dilatation of the cervix, are in the ilio-inguinal and ilio-hypogastric nerves (belonging to the cerebro-spinal system), and that these pains are transmitted telegraphically, so to speak, by the irritation of the nerves supplied to the uterus and cervix (which belong chiefly to the sympathetic system). Now, it seems to me that there is one settled fact relating to the benefits conferred by the local use of cocaine, which is, that to secure them it is necessary to employ the agent directly to the nerves which have, or are to give, the sensation of pain, or to the immediate nerve-trunks, or nerve-centres. No applications to the cervix can accomplish this. I have never employed cocaine after the escape of the head into the vagina, nor shall I do so, for I am sure that chloroform can afford much more satisfactory moderation of pain; and in all cases where comparison might be instituted, the latter agent, intelligently administered, will be free from danger. I may add that I never use chloroform during the first stage of labor, relying upon chloral, or, rarely, morphine when any measures are required."

INDIANA STATE MEDICAL SOCIETY.—The following officers have been elected for the ensuing year: G. W. H. Kemper, M.D., President, Muncie; W. V. Wiles, M.D., Vice-President, Spencer; F. S. Elder, M.D., Secretary, Indianapolis; J. McLean Moulder, M.D., Assistant Secretary, Kokomo; C. B. Higgins, M.D., Treasurer, Peru.

THE INCREASE OF PHYSICIANS in New York and Brooklyn during the last three years is shown in the following table:

Years.	New York.	Brooklyn.	New York, New Jersey, and Connecticut.
1884-5.....	128	28	278
1885-6.....	113	87	125
1886-7.....	24	41	190

The decrease in the annual increment of New York City would be striking if the figures were trustworthy.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION has had an excellent record and has taken a place among the leading societies of the country. In the last year or two it is reported to have dropped off a little in activity, and at the last meeting of the American Medical Association its delegates were not admitted because the society had never adopted the Code. We learn that the next meeting at Quincy, Ill., promises to be a most successful one.

THE PASTEUR INSTITUTE OF THIS CITY has got to work, and a boy, bitten some weeks ago "by a dog supposed to be mad," has been inoculated *secundum artem*.

PROBABLY AN IMPOSTOR.—We think it just to warn the members of the profession in New York against a man who says he is a physician from the West, passing through the city on his way to visit his dying mother. He called on several physicians on Monday evening to beg a loan on a check, saying that he had lost his pocket-book, containing a sum of money and some certified checks, and that it was absolutely necessary for him to leave on the 11.30 P.M. train in order to see his mother alive. On Tuesday evening he called on others, alleging that he must leave the city on the nine o'clock train. Our suspicions may possibly be unjust to an unfortunate man, but it will do no harm to warn physicians against loaning money to any stranger who can give no better security than a check on an out-of-town bank.

HEN'S BLOOD IN THE TREATMENT OF ANÆMIA AND CHLOROSIS.—It is not easy to take seriously the claim of Dr. Francesco Brancaccio, of Naples, that the blood of the domestic fowl is an efficient remedy in pernicious and simple anæmia and chlorosis. Dr. Brancaccio, however, reports in detail eight cases to substantiate his opinion, two of these being of primary anæmia. All were first thoroughly treated with the ordinary remedies—iron, arsenic, quinine, and oxygen, but with no success. Hen's blood was then given in doses ranging from eighty to two hundred grammes daily. Examinations with the globulimeter were made to determine the diagnosis and progress of the disorder.

CREDIT TO WHOM CREDIT IS DUE.—The *Weekly Medical Review* is a wide-awake and progressive journal, but it makes a mistake in crediting the *Therapeutic Gazette* with an article on the "Diagnostic Test for Typhoid Fever," which appeared in the editorial columns of THE RECORD of May 22d.

CHRONIC DEFORMING RHEUMATISM—RHEUMATOID ARTHRITIS.—Many authors have of late years considered this to be a neuro-trophic disease. Now, MM. Pitres and Vaillard announce that in two typical cases they found extensive and profound multiple degenerative neuritis.

KAVA KAVA IN GONORRHŒA.—Dr. H. C. Rogers, of Brooklyn, N. Y., writes: "I beg to avail myself of the medium of your journal to answer various letters addressed to me by gentlemen in reference to my paper 'On the Use of the Fluid Extract of Kava Kava in Gonorrhœa,' published in THE MEDICAL RECORD of May 8, 1886. I do not think that kava kava controls the disease as quickly as cubebs or copaiva, when they are taken at regular intervals for several successive weeks. There are few patients, however, who can take these medicines regularly, for even a brief period, without having their stomachs rebel, and thus becoming victims to nausea, eructations, vomiting, and anorexia. The consequence is that the medicine is taken very irregularly, or not at all. In nearly two hundred cases where I have used the fluid extract of kava kava, I have not seen or heard of a single case in which the medicine produced any unpleasant stomach symptoms, nor am I aware of any instance where it impaired the appetite. In fact, many of the patients informed me that it increased their desire for food. I wish to add that the cases mentioned in my paper as treated 'at the hospital' were of those in the out-door department of the hospital, as distinguished from those treated in private practice. In regard to both these classes of patients, I venture the opinion that the average duration of the disease would have been somewhat less had my instruction respecting the disuse of alcoholics been more strictly observed."

AT A DINNER GIVEN TO DR. WILLIAM H. PANCOAST on his retirement from the Chair of Anatomy in Jefferson College, he said that he had accepted the Chair of General Descriptive and Surgical Anatomy and Clinical Surgery, in the Medico-Chirurgical College of Philadelphia, an institution which is working out the problem of higher medical education by establishing preliminary examinations and a three years' graded course. This college, he said, had just purchased a commodious property near the centre of the city, and when the alterations were completed the Philadelphia Dental College, the Charity Hospital for Skin-diseases, and the School of Anatomy would unite with the Medico-Chirurgical Hospital and College in furthering the great and important work in which they are engaged. The dinner is described as beyond anything "since the dinner given to Professor Gross." We are at a loss to understand why among the guests there are mentioned none of the Jefferson College Faculty, or so few of the names of Philadelphia's well-known physicians.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-first Annual Session, held at Winchester, Ky., June 23, 24, and 25, 1886.

WEDNESDAY, JUNE 23D—FIRST DAY—MORNING SESSION.

THE meeting was called to order by the President, J. P. THOMAS, M.D., of Pembroke. The minutes were read and the reports of the Committee on Credentials, the Committee of Arrangements, the Librarian, Secretary, and Treasurer, received and adopted. The amount in the treasury was $183.60. The report on necrology included the names of Drs. R. W. Dunlap and A. R. McKee, both of Danville.

Then followed

THE PRESIDENT'S ADDRESS.

He took for his subject "The Best Doctor for the Commonwealth, or the Doctor as an Officer of State." After a few remarks laudatory of the Society and its work he launched into the question of a higher medical education. He referred to the poor results attained in his own State, but was gratified at the work done in Alabama, Illinois, North Carolina, and Virginia. He would not compel, or even advise, the embryo doctor to waste his time in the

STUDY OF THE CLASSICS,

but endeavor before entering upon the study of medicine, to get a good English education, supplemented with all the knowledge of the natural sciences possible, especially chemistry and physiology.

The National Government is very strict in the selection of her medical officers. Why? Because she cannot afford to place incompetent medical men in charge of the lives of her soldiers and sailors. Why not the same solicitude as to her citizens? There are stringent rules as to the government of railroad engineers, because human life is constantly dependent upon their skill. Why not as strict laws regarding the education and training of medical men and women, who are also the guardians of the lives of the people? The present law in this State is utterly useless and inoperative and should be erased from the statutes.

The only way to get

PROFESSIONAL AGGRANDISEMENT

is by the co-operation and zeal of its members; whatever the doctors unitedly want they can get. Our greatest enemies are in our own ranks and camp. Why is it that our Legislature constantly shows more willingness to appropriate sums sufficient to stamp out disease in animals than to protect the health and prevent disease in the people. Two thousand five hundred dollars per annum is reluctantly granted our State Board of Health to crush out and prevent epidemic disease among the people of the entire State, and $6,000 voted from the treasury to stamp out a single disease in a single locality and among a single herd. The wonder is that the Kentucky State Board of Health has been able to accomplish what it has with the amount of money at its disposal.

DR. M. F. COOMES, of Louisville, then made the report on "Ophthalmology."

DR. J. G. CARPENTER, of Stanford, reported a case of

ULCERATION OF THE SIGMOID FLEXURE OF THE COLON.

It occurred as the sequel of dysentery. The patient was a male, aged twenty, American, good family history and constitution. Case seven months in duration. He elevated the trunk to seventy or eighty degrees, retracted the anus with a Sims speculum, inflated the bowel, used at different times sunlight, lamplight, and the electric lamp, and laryngoscopic mirror. He could see within the bowel twelve inches by measurement. To cleanse the bowel he used water as hot as could be borne. On looking up the literature the reporter found that Sims had reported a similar case in "Bryant's Surgery." This hot water was used twice daily for cleansing and antiphlogistic purposes. Nitrate of silver was applied every six to eight days, of a strength of forty to sixty grains per ounce.

DR. PINCKNEY THOMPSON, of Henderson, thought the claims of the reporter impossible.

DR. W. H. WATHEN, of Louisville, thought it could be done.

DR. WILLIAM BAILEY, of Louisville, thought that the reporter had been "able to see farther into the subject" than anyone else.

Adjourned till 8 P.M.

EVENING SESSION.

DR. E. WILLIAMS, of Cincinnati, read one of his customary witty papers on

THE UNCOMMONNESS OF COMMON POLITENESS.

Why is politeness like small-pox and scarlet fever? Because it is contagious. Non-contagious politeness is malignant. Like common sense, common politeness is a scarce thing in the market. The address was received with laughter, applause, and a vote of thanks.

DR. D. S. REYNOLDS, of Louisville, made

THE REPORT ON PATHOLOGY.

In considering this new science which we call pathology he wished to instil a sort of scepticism which rejects as facts everything which cannot be clearly demonstrated. He stood to affirm that

TUBERCULOSIS IS AN INFECTIOUS AND CONTAGIOUS DISEASE,

disputed by no one who has undertaken experimental investigations. Heredity, he thought, had nothing to do with it. He reported cases where he had found tuberculous bacilli in catarrh of the nose and ear. He reported, also, his examination of water from typhoid-fever wells in Louisville, and exhibited microscopical specimens.

DR. F. C. WILSON, of Louisville, thought heredity had much to do with the production of tuberculosis. He thought many cases could be traced to contact.

DR. PINCKNEY THOMPSON, of Henderson, thought that the specific cause of typhoid fever had not been discovered. In the city it is impossible to find a case which cannot be traced to some other case. In the country he had seen typhoid fever exist where it was impossible to have come from another case.

DR. WILLIAM BAILEY, of Louisville, objected to some of the positive assertions made in the paper. To him

THE GERM THEORY IS THE MOST PLAUSIBLE ONE.

Most theories must, as yet, be held *sub judice*. He thought we could not dismiss heredity with a wave of the hand, and was sure that we could not make the insurance companies dismiss heredity from their questions.

DR. J. T. WHITTAKER, of Cincinnati, said that in discussing the acquisition or

HEREDITY OF TUBERCULOSIS

we should inquire, Is there not more than one element in this disease? Disease requires not only seed, but soil. We might inherit the soil in which the disease would develop. The whole question hinges upon inoculability. This is proven. Introduce bacteria into the eye and you can see every stage of its development. If the disease is inoculable it must be contagious. Thirty per cent. of us die of it. Most of us recover, as is shown by the presence of tubercles post-mortem. The seed had not fallen in suitable ground. There is no disinfectant like ventilation. We use horrible disinfectants, are then obliged to open the windows, and thus get ventila-

tion. We should destroy the sputum by burning, or expeciorate into a jar containing bichloride solution. In Germany they separate tuberculosis cases from others. Here there is a great hue and cry if small-box is exposed in the ward. Yet tnberculosis is so exposed every day. It is a question whether a child ever inherits any disease from its father. Pneumatic differentiation, he thought, had entirely changed the prognosis of tuberculosis. The ventilation of the lungs is the great thing. He did not wish to be quoted as saying that this was a sure cure for consumption. The best method we had was to secure ventilation of the lungs. No spray will destroy all of the bacilli. It cannot reach them all. This pneumatic treatment is not as good as a mountain-top, yet it is the next best thing. I do not think everyone who has tuberculosis must die.

Dr. J. N. McCormac, of Bowling Green, thought that if it was true that micro-organisms are given off which are dangerous to persons in the room, we are guilty of criminal neglect in not acting accordingly. He spoke of the action of the National Board of Health at its recent meeting; spoke in favor of the disinfecting of typhoid-fever stools, and said there was no one here who did not believe that THE FIRST CASE OF CHOLERA, if found, could be stamped out. He referred to Sternberg's investigations of disinfectants, which he said were only deodorizers and delusions. He favored the use of the bichloride.

Dr. E. R. Palmer, of Louisville, thought that the feature most worthy of discussion was that bearing on heredity. He thought the pendulum had swung too far. He agreed with Dr. Whittaker that the father could not transmit a specific taint. He might transmit an inherent weakness. We are probably all constantly inhaling tuberculous germs, but they do not find the proper soil. The father may transmit to his offspring certain conditions of body, which may be followed by tuberculosis. He thinks, with Dr. Otis, that unless the father syphilizes the mother, he does not syphilize the offspring.

Dr. T. A. Reamy, of Cincinnati: So long as the wife is not pregnant she is safe, unless mucous patches or sores are present. He had known the father to propagate the disease ten years after the disappearance of all symptoms.

Dr. D. S. Reynolds, in closing the discussion, said he assumed that no one except those gentlemen who have not undertaken investigation will assume that tuberculosis is due to one cause. It is well known that many persons inherit so-called strumous diathesis. The point in relation to the transmission of tuberculosis by the father has been settled. The father cannot transmit to the offspring anything except tendency to form. He cannot transmit direct disease. The principal point is, What shall be done to prevent this disease? Answer, The destruction of the media by which it is transmitted.

The Committee on Nominations reported the following

NAMES OF OFFICERS

for the ensuing year, who, on motion, were declared elected:

Dr. W. H. Wathen, of Louisville, President; Dr. J. M. Harwood, of Shelbyville, Senior Vice-President; Dr. J. H. McKinley, of Winchester, Junior Vice-President; Dr. J. Steel Bailey, of Stanford, Permanent Secretary; Dr. F. C. Simpson, of Bardstown, Assistant Secretary; Dr. Edward Alcorn, of Hustonville, Treasurer; Dr. J. G. Brooks, of Paducah, Chairman Committee of Arrangements; Drs. D. S. Reynolds, of Louisville, A. W. Willis, of Winchester, A. Sargent, of Hopkinsville, J. H. Letcher, of Henderson, W. E. Poynter, of Midway, J. W. Harwood, of Shelbyville, Board of Censors.

The next place of meeting will be Paducah, the third Wednesday in June.

The newly elected President was conducted to the chair, and made a few remarks, after which the Society adjourned till 8 A.M.

THURSDAY, JUNE 24TH—SECOND DAY—MORNING SESSION.

Dr. J. N. Irvin, of Louisville, made the

REPORT ON THE PROGRESS OF THE PRACTICE OF MEDICINE.

He discussed tricuspid regurgitation, tubing of the larynx for croup and diphtheria, intra-uterine injection for the purpose of producing premature delivery, fatal results of these injections, the mechanical theory of inflammation, and the importance of inflammation producing the pyrexia of many fevers.

Dr. J. T. Whittaker, of Cincinnati, thought that tricuspid regurgitation reveals itself by a bruit a considerable time before pulsation in the neck is observed. The earliest sign is an increasing tension of the radial artery and hypertrophy of the left heart.

INTUBATION OF THE LARYNX

has been pointed out as feasible in the treatment of diphtheria and croup. My experience has been inevitable failure. I resort to tracheotomy. This is done so easily and readily by the surgeon now. He dwelt especially on that class of cases having crowing respiration. Rickets, he said, were very much more common than generally supposed. This spasm of the larynx calls attention to rickets. Diarrhœa is most common in these children, alternating with constipation, often sweating and restlessness make up the diagnosis in the earlier stage of the disease, after which come the enlarged ends of bone, the roseola, the deformities of the pelvic, and other bones. We should treat rickets early. It needs only treatment to be relieved. Cod-liver oil and phosphorus are the remedies. Write as follows: Phosphorus, one-seventh grain; emulsion of cod-liver oil and gum-arabic, two ounces. The laryngismus stridulus disappears with the disease.

As to pyrexia—we are about to undergo great change in the treatment of fevers. We have been taught to subdue fevers at all cost. This view is changing. It is pretty well settled that typhoid fever is due to a specific cause. It would seem that nature's method of attenuating virus is by elevation of temperature. It may be that we are taking away this very method of nature to relieve herself of trouble, and we are not justified in resorting to extreme methods of antipyresis.

Dr. William Bailey, of Louisville, thought that intubation of the larynx had proven successful in the hands of those who had used it. He thought croupous pneumonia not simply an essential fever, but there was something back of that. He thought these fevers quite different from those of boils and abscesses. They take a typical course.

Dr, J. A. Larrabee, of Louisville, spoke

REGARDING RICKETS.

He thought the prevalence of the disease had increased. The trouble is, it is not recognized until the elaborations and distortions show that the disease *was* rickets, not *is* rickets. So many children are thrown upon the world, like Romulus and Remus, to be brought up on the modern wolf—the feeding-bottle. The origin of the disease he believed to be in the intestinal canal. Phosphorus is of less use than the care of the intestinal canal. Hygienic surroundings are all-important. The principal means of treatment are not found in the apothecary's shop. Fresh air, food, and exercise are required. This is one of the most important diseases in infantile practice.

As to intubation, I have been enlightened. I had been somewhat drawn toward it, but had no practical experience.

Dr. M. T. Scott, of Lexington, made the

REPORT ON THE PROGRESS OF SURGERY.

He first discussed abdominal surgery and thought true conservatism consisted in saving the lives of our patients.

He spoke laudatorily of Kentucky's patron saint, McDowel, and considered his boldness, sagacity, and success no less worthy of admiration and praise than the 135 consecutive, complete, and successful ovariotomies of Tait. He next considered the advisability of abdominal section for traumatic peritonitis. Tait, for years, has not allowed a patient to die from acute peritonitis without extending the chances of recovery offered by abdominal section. He has operated on 44 such, all but 3 recovering. Owing to modern improvements in firearms, visceral lesions will in all probability be vastly more frequent than formerly. Laparotomy for perforating wounds has the following objects: 1, To establish diagnosis; 2, to repair breaks in the continuity of the organ; 3, to arrest hemorrhage; 4, to remove extravasated and extraneous matter.

Gastrotomy as a means of removing foreign bodies and locally treating the stomach is now recognized as justifiable. He referred further to duodenostomy, surgery of the spleen, liver, gall stones, cholecystotomy, operations on the kidney, spleen, and bladder—also to the action of cocaine on the genito-urinary tract. This remedy, he thought, lessened the calibre of the urethra.

AS TO ALEXANDER'S OPERATION,

he thought that careful gynecologists would decide with Emmet that as much good can be accomplished without subjecting the patient to such questionable risks.

Dr. D. W. Yandell, of Louisville, complimented the paper highly. He found little room for discussion, but wished to speak on one point, the difference between

STAB AND SHOT WOUNDS,

of which we unfortunately see so much in Kentucky. The size of the ball is of first importance. I think Otis' statement with regard to Minié balls correct, viz., the man who gets a Minié-ball through the small intestine dies. The small six-shooter, especially the Smith & Wesson, often causes injuries which we can reach. Hence I always inquire, when called to a shot injury, was it a Smith & Wesson? The principal question is that which relates to symptoms. Shot-wounds cause more or less shock, as to the nature of the wound, the individual, and the circumstances of their occurrence. To say that in all shot-wounds which enter the belly we should open the abdomen, is a very loose statement. I would say in either shot or stab wounds, open no belly unless there are symptoms demanding it. These symptoms, if going to occur, are generally present by the time you have reached the patient. Men are not shot down by your side. In shot-wounds, unless there are symptoms on the part of the pulse or temperature that there has been injury to some viscus, I do not open the abdomen. I would make the abdominal cut large enough to see every possible danger. As to cocaine in cystitis and operations done on the urethra, I have been disappointed.

Dr. J. G. Brooks, of Paducah, reported a case of

LAPAROTOMY.

A lad, aged eleven, was stabbed in the abdomen with a Barlow knife. A large piece of intestine protruded. He was found pallid, vomiting, and nearly pulseless. On consultation it was decided to open the abdomen. The boy was thought to be dying. An incision was made in the median line; on opening the peritoneum a pint of blood spurted out. A brief search revealed a wounded vessel in the mesentery, which was tied, the cavity cleansed, the intestine washed with warm antiseptic water and returned. Brandy was given hypodermatically. No sponges were at hand. The operation was made on the bed and by lamplight. Fortunately the most elegant operations do not always result most elegantly. The third day the patient sat up, and the tenth day attended court and testified. The sixth day the sutures were removed and the wound found healed. A considerable amount of blood was allowed to remain, but was fortunately readily absorbed. The propriety of this and the propriety of keeping the stab-wound open might be questioned. Had the operation been adverse, the lawyers at trial would probably have said the doctor, not the knife, killed the boy.

Dr. J. N. McCormac, of Bowling Green, would have commended the operation had it been adverse in result. He reported a case in which, nine years ago, he had removed eleven inches of the small intestine for gangrene.

Adjourned till 2 P.M.

AFTERNOON SESSION.

Dr. D. T. Smith, of Louisville, read a paper on

SOME MOOT POINTS IN THE MECHANISM OF LABOR.

The points discussed were, the cause of head presentations, the physics of expulsion, and the mechanism of rotation. The doctor believed that the great preponderance of head presentations is induced by the effects of swimming movements upon animals in water in connection with the changes undergone by the uterus during gestation. A man in water not using the arms, but making natural movements with his legs, is drawn head foremost to the bottom. The child in the womb scarcely uses its arms, and the movements of its legs cause it to take the position head downward. In the latter months of pregnancy, the uterus being conical in the lower segment, the child is retained in that position. The animal, on the other hand, swims by its natural movements upward to the outlet. The mechanism of expulsion has for its object the changing of the uterus from the spherical to the cylindrical form, and thereby the most economical reduction of its capacity. Hence the development of the circular band of fibres around the middle of the organ and the arrangement of muscular contraction which causes the body of the parturient to curve forward. The essayist was of the opinion that the reflexes from the lower segment of the uterus are conveyed to the dorsal and abdominal muscles instead of its own muscles. He doubted if the iliac and psoas muscles are greatly contracted during labor.

In rotation he inclines to think that the fact that the face and forehead are more angular in outline and are also smoother and more easily freed from vernix, has a share in determining rotation. This condition increases on the passage of the face. This feature, the essayist suspected, might exert a very decisive influence in rotation from right to left occipito-posterior positions to occipito-anterior positions.

Dr. J. M. Harwood, of Shelbyville, read a paper on

THE THIRD STAGE OF LABOR.

In this paper he advocated the immediate removal of the placenta and recommended the same treatment in cases of retained placenta.

Dr. W. H. Wathen, of Louisville, thought this was a subject to which the physician pays too little attention, believing that nature will attend to it, and she usually will. So may an ignorant midwife in a majority of cases; yet there are others which require scientific knowledge, and without scientific knowledge children and women are permitted to die. The dangers are

HEMORRHAGE AND SEPTICÆMIA.

He considered first the question of hemorrhage. To prevent this, the moment the child is born let your hand follow down the uterus. Keep your hand over it, above the symphysis pubes, and watch that the uterus does not relax. If it is contracted, let nature have an opportunity to expel the placenta. If not, use gentle friction.

Dr. J. G. Cecil, of Louisville, did not agree with the essayist in his views as to traction on the cord. He described, minutely, Crede's method. He did not think it best to hurry too much in expressing the placenta. We owe some duty to the child. It has been proven that

the early tying of the cord robs the child of from one to three ounces of blood. As one-ninth of the child is blood, and if the child weighed seven pounds, this amount —12.33 ounces—would be felt. He believed Crede's method the best method to prevent hemorrhage. He would defer separating the placenta till pulsation had ceased.

Dr. Turner Anderson, of Louisville, could not conceive of anything more hurtful than this

TELEGRAPHIC METHOD OF DELIVERING THE PLACENTA.

He thought that all practitioners, as they grow older, find fewer cases requiring the introduction of the hand into the uterus. In the earlier years of my practice I encountered more cases of retained placenta than since. This has diminished, till now a retained or adherent placenta, or hemorrhage, is one of the rarest things, and I am beginning to believe that they are occurrences which happen in our earlier practice. I advise to wait. My practice is to allow the patient to recover somewhat from the shock of the second stage. Unless there are contra-indications, I wait from fifteen to forty-five minutes. The patient by this time has recovered from the shock, and tonic contraction has set in. I prefer the method of Crede to all others where I am obliged to assist. I do not believe in introducing the hand when avoidable; not that I think a clean hand will cause any trouble.

Dr. T. A. Reamy, of Cincinnati, promised to discover no new thing to the Society, but wished to condemn the method of Crede in natural labor. The adoption of Crede's method throughout the country has been the cause of much more injury than good. You may just as well cut the cord at once as compress the uterus and expel the placenta. The latter stops the pulsation. Placing the hand on the abdomen is only for the purpose of making observations, not to contract the uterus. We never have hemorrhage when there is pulsation in the cord. While the cord pulsates you may rest easy.

POST-PARTUM HEMORRHAGE IS A GREAT BUGBEAR.

When the cycle is complete the uterus will contract. It knows how to contract; the idea of our teaching it how! True obstetric science is marvellous. Irregular contraction and retained placenta is often due to this compression. After the placenta is detached the pulse becomes weak and ceases.

Dr. Harwood, in reply, said that he had not found more cases of hemorrhage and retained placenta in the earlier years of his practice, but they increased as he grew older.

Dr. J. B. Marvin, of Louisville, made a clinical report on

PROGRESSIVE MUSCULAR ATROPHY,

in which he reported a case and dwelt on the incurability of the disease.

Dr. H. H. Grant, of Louisville, made the report on the

SURGERY OF THE GENITO-URINARY CANAL.

Dr. D. W. Yandell, of Louisville, instead of making the incision into the bladder with the scissors, uses the finger-nail. He cuts down on to the bladder, then lays aside the instruments and scratches his way into the bladder with his finger-nails. This method avoids all hemorrhage. He does not use stitching, but inserts the drainage-tube. Harrison's operation of perineotomy, he thought, would grow in favor.

Dr. Joseph Ransohoff, of Cincinnati, said that in 1880 he was called into Indiana to see a man who had been passing his water every ten to fifteen minutes. The parts were so sensitive that it was impossible to pass any instrument. The patient was put under ether, as we had not cocaine as yet.

A PAPILLOMATOUS TUMOR OF THE BLADDER

was found, and perineotomy was done. In large, flabby persons, those who generally have enlarged prostates, the perineum is very long. He related a case where his patient died in twenty-four hours after he removed two quarts of urine by the catheter. The patient suffered more from his successful introduction of the catheter than from the unsuccessful attempts of his predecessors. He died from shock, as one does from the removal of too great an amount of ascites at one time. He did not favor delay in operating in prostatic enlargement.

(To be continued.)

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURE—CONSULTANTS AND GENERAL PRACTITIONERS—TESTS FOR ALBUMEN—ANEURISM OF THE HEPATIC ARTERY—SIMULTANEOUS INFLAMMATION OF SEVERAL SEROUS MEMBRANES—DEGREES FOR LONDON MEDICAL STUDENTS—THE MEDICAL COUNCIL AND THE VISITATION OF EXAMINATIONS—STATISTICS OF PNEUMONIA—THE MEDICAL BILL AND THE REGISTRATION OF FOREIGN MEDICAL DEGREES.

London, June 20, 1886.

At a recent meeting of the Medical and Chirurgical Society an interesting paper, by Dr. Steavenson and Mr. Bruce Clarke (both of St. Bartholomew's Hospital), was read. The subject of it was "The Treatment of Stricture of the Urethra by Electrolysis." They maintained that their results bore out in every particular those reported by Dr. Newman, of New York. The negative pole of the battery was applied within the urethra. The electrolytic action could be limited to the points touched by the electrode, as the current need not be passed until the apparatus was *in situ*. No anæsthetic was used and they had found but little pain to be caused, and usually no hemorrhage. The authors suggested that for parts difficult of access, such as the male urethra and the uterine cervical canal, the use of electricity might be advantageously substituted for that of ordinary caustics. Eschars produced by caustic alkalies were said to heal with less contraction than wounds otherwise caused, and electrolysis with the negative pole of a battery was a means of applying the same destructive action as that caused by caustic alkalies to parts difficult of access by other agents and methods.

In the discussion following the paper Messrs. Berkeley Hill, Swinford Edwards, and Buckstone Browne took part, and expressed a guarded approval of electrolysis as a therapeutic agent in dealing with urethral stricture. The general opinion of the speakers seemed to be that the cases operated on were as yet too few, and the time which had elapsed too short, for a final opinion to be expressed on the subject—a view which was shared by the authors themselves.

Some discussion has taken place respecting consultants, general practitioners, and their mutual relations. A good deal of jealousy apparently exists, for the existence of which something may be said on both sides. Among consultants, specialists are apparently the greatest sinners. I have heard of a specialist who, in taking sole charge of a patient to operate on him, gave as a reason for excluding the general practitioner in attendance, that it was no part of his duty to teach his own specialty to the latter. I hope and believe that such instances are not of common occurrence. Still, it is undeniable that some consultants are apparently only too ready to take entire charge of patients who have really been sent them simply to obtain an opinion—not to place themselves under them for a course of treatment. The question has, of course, like most others, two aspects. I have heard consultants remark that some general practitioners would never send their patients to a

physician or surgeon until they were obliged to, but kept them in hand as long as they could themselves.

At the last meeting of the Clinical Society the report of the Albumen Test Committee was presented. In this the various tests were reviewed. Nitric acid was pronounced to be, on the whole, the most reliable and delicate. Those practitioners who have gone on using it, and have been too conservative to adopt any of the numerous new tests introduced within the last few years, may therefore now have the satisfaction of feeling that they are, after all, quite abreast of modern science. Dr. Oliver's urinary test-papers received a well-deserved commendation for their portability and delicacy of reaction. The committee also reported favorably on Dr. Johnson's picric-acid test, Dr. Pavy's pellets (ferrocyanide of potassium and citric acid), the potassio-mercuric iodide test, and Sir William Roberts' acid-brine test.

At the same meeting of the Society Dr. Caton, of Liverpool, read notes of a case of aneurism of the hepatic artery. Only ten cases of this affection had, he said, been previously placed on record. In Dr. Caton's case the aneurism was not diagnosed during life.

Dr. Hale White read a paper on a case in which simultaneous inflammation of several serous membranes occurred. The patient was a girl of nineteen. She had never suffered from rheumatism. Peritonitis, pericarditis, pleurisy, and endocarditis all occurred. Recovery ensued.

A special meeting of the Metropolitan Counties Branch of the British Medical Association was held on Monday last, to consider the question of medical degrees for London students. The chair was taken by Dr. Walter Dickson, President of the Branch. Speeches in favor of the movement were delivered by Sir Andrew Clark, Mr. Jonathan Hutchinson, Mr. Macnamara, Drs. Habershon, Moxon, Broadbent, Sansom, and the chairman. The following resolution was moved by Sir Andrew Clark, and carried with only one or two dissentients: "That negotiations with the University of London not having led to the desired result, this meeting recommends that the Royal College of Physicians of London and the Royal College of Surgeons of England be requested to endeavor to obtain power to grant degrees in medicine." A circumstance which cannot but have contributed largely to concentrate professional attention on this subject has been the increase of late years in the number of students going north. I do not mean to say that the entries in all the London schools have absolutely decreased, but they have most decidedly not gone on increasing as they would have done but for the exodus northward. Students are finding out that practically they can, by going to one of the Scottish universities, obtain a degree in as little time as it takes them in London to get the ordinary diplomas. They may have to work a little harder, but they have the stimulus before them of a greater reward, and modern medical students are by no means so devoid of industry as those would think whose sole acquaintance with them is derived from the pages of Dickens. The "Bob Sawyer" type has for the most part disappeared. Needless to say, the stationary state of the entries at the London schools has proved a powerful stimulus to London teachers to take up the degree question. The argument to the pocket is a very powerful one, and has, to say the least, proved a powerful adjuvant to more worthy motives.

The recent meeting of the General Medical Council has been, if not very instructive, at any rate amusing. Dr. Haughton, of Dublin, moved a resolution that it was desirable to visit and report on the methods of teaching required by the licensing bodies. Dr. Matthews Duncan, in seconding the motion, sounded the praises of the lecture system, and maintained that a man would learn midwifery better in three months by attending lectures than in two years from a book. "The *vivâ voce* lectures of a good teacher," he said, "would always be valuable." But unfortunately all teachers are not good, and those who are condemned to sit and listen to lectures from bad lecturers will be tempted to echo Dr. Quain's remark that he had "no faith in lectures." Dr. Struthers, of Aberdeen, defended the lecture system, and also the Scotch plan of teachers being also examiners. No system of examination, he maintained, could be complete in which the teacher did not take part, and he would rather sell stamps in a post-office than be a teacher under those circumstances. Dr. Struthers wound up a very laudatory account of the Scotch system by referring to the slight remuneration of Scotch teachers. Mr. Rawdon Macnamara satirically remarked on Dr. Struthers' omission to refer to Scotch modesty, and Dr. Haldane said that, as for the moderate incomes of Scotch teachers, why, some of them were making three or four thousand pounds a year. Dr. Haughton's motion was carried, as was also a resolution that visitors be appointed by the General Medical Council to visit the several medical schools and report upon their methods of teaching.

Some lively discussion took place on the presentation of the report of the committee who had visited the final examinations of the universities of the United Kingdom. Much of the report will certainly excite surprise. Oxford has the repute of being sufficiently lenient in its medical examinations, but got off with very slight censure. The classical paper was condemned, and the examination in surgery was deemed insufficient. At Cambridge, which is generally belived to be more exacting in its medical examinations, both surgery and midwifery were condemned. Durham was favorably reported on, which certainly seems rather anomalous after the censure passed upon what have been believed to be severer examinations. The medical degrees of the London University have long been regarded as the most difficult to obtain of any in the kingdom, but their arrangements have met with unsparing criticism. The clinical examination in medicine and the examinations in medicine and surgery have been branded as not sufficiently searching. Dr. Quain defended the university, and admitted that oral examination might be extended, and that more surgery might be included in the M.B., but was it worth three hundred and seventy pounds to secure that, for that was what the visitation cost? Dr. Struthers rejoined that it was worth three hundred pounds to find the University of London out, for they had all been told to look up to it as a model institution.

The question of the teachers being also examiners was raised again in connection with the University of Edinburgh. The examinations in practical surgery for the Edinburgh degree were deemed unsatisfactory, and the absence of the laryngoscope and the ophthalmoscope from the examinations was remarked upon. Dr. Matthews Duncan said he disapproved of the uterine sound being used in the examination, as had been stated by the visitors to be the case. There was nothing to show that the same woman might not be subjected to the same operation by a succession of students. The University of Glasgow was favorably reported on. With reference to the University of Dublin, whose examinations have a high repute for severity, it was stated by the representative in the Council of the Royal University of Ireland (Dr. Banks) that if (at the University of Dublin) a man passed well in other subjects, but failed in one, he was put back, but not re-examined upon the subjects upon which he answered well. Dr. Banks remarked that it was a very hard thing for a man who answered well in clinical medicine and surgery, and who might fail upon some less important subject, to have to keep up his knowledge of minute anatomy, and be re-examined upon it at the end of another six or twelve months—an observation which examining boards in general would do well to bear in mind.

At the concluding meeting for this session of the Medical and Chirurgical Society, Dr. Angel Money read an elaborate paper on some statistics of pneumonia, referring especially to the relations of delirium and tempera-

ture. Dr. Money concurred with Heinze in the latter's conclusion that mere pyrexia has little to do in the production of delirium, but he admitted that prolonged pyrexia and high transitory fever must exercise a deteriorating influence on the nervous centres, and therefore predispose to delirium. From his investigations he had found that the number of cases with delirium was largest in those in which the highest temperature recorded was 104° and 105°. The presence or absence of delirium appeared to exert no influence on the mortality. The third decade of life (in cases where the temperature exceeded 104°) seemed most fertile in the production of delirium, but the largest number of cases of pneumonia occurred at that age and with that degree of fever.

Dr. Wilson Fox said it was important to recognize that delirium often set in with a falling temperature, and he opposed the wholesale adoption of the cold treatment of pneumonia.

Dr. Norman Moore discussed the causes of death in pneumonia, a prominent place amongst which he was inclined to give to emphysema. He considered the amount of exudation was a point of importance in relation to prognosis, and that this might be determined to a large extent by careful physical examination.

Dr. Moxon opposed Dr. Norman Moore's views as regards emphysema, and deprecated excessive physical examination, which might, he thought, have something to do with the causation of a fatal issue.

Dr. Oliver Wendell Holmes was one of the guests at the *conversazione* at the College of Surgeons, given by the President, on Wednesday last. Over thirteen hundred persons were present, and the museum was illuminated by the electric light. On the same evening he had previously dined with Sir Henry Thompson—Mr. Gladstone, Mr. John Morley, Mr. Browning, Sir James Paget, and others being invited to meet him.

The dissolution of Parliament being so near, there is but little chance of the medical bill passing, although Mr. Gladstone has promised it shall receive special attention. It has been so emasculated that, should it pass, the best that can be said of it is that it is not likely to do any harm. On the suggestion of Dr. Balthazar Foster, M.P., one very useful clause has been added, viz., one to permit the registration of foreign medical degrees obtained by British practitioners already registered. At present no foreign degree, however honestly obtained, can be registered, although the holder may already be registered in virtue of other qualifications.

OUR PARIS LETTER.

(From our Special Correspondent.)

PARIS, June 20, 1886.

IN the month of January last, Dr. A. Nicolas, formerly a surgeon in the French navy, was engaged by the Society of Public Works of Paris to proceed on a mission to the Isthmus of Panama, with a view to organizing the medical service of the Society, and at the same time to ascertain whether the Isthmus is as insalubrious as it has been reported to be, and if so, to make researches as to the cause or causes, and to suggest such measures as may be found necessary to extenuate the effects of the climate, and render the place habitable by the employés of the Society. Dr. Nicolas returned to Paris about three weeks ago, and soon after his arrival read his report before the Academy of Medicine, which is a most interesting document, but which, for want of space, cannot be reproduced here in its entirety. I may, however, mention that it is anything but encouraging to those who may have an idea to go thither in search of employment, or of locating themselves there, as I gather from the report that the climate at the Isthmus is as disastrous alike to Europeans or white races as it is to the natives or blacks. According to Dr. Nicolas, the principal cause of insalubrity is the amount of stagnant water about the place, and the pernicious influences peculiar to tropical regions, the prevailing diseases being hepatitis and dysentery among the whites, fevers, dysentery, and chest affections among the blacks. The whites are, of course, also subject to fevers, but nothing like in the same proportion as the blacks. In studying the etiology of these diseases, Dr. Nicolas does not hesitate to affirm that in the negro they are produced by cold, as it is well known that the power of resistance to climatic influences is not very great in them. The fevers most prevalent are intermittent, or the common paludal type, remittent bilious fever, and yellow fever.

The author avers that, for the first time in all his practice, he heard during his stay at Panama of cold being incriminated in the etiology of fevers, and during his sojourn of three months in that locality he learned by experience the confirmation of this assertion, for which he offers the following explanation: "The perspiration produced by the heat at Panama is more passive than otherwise; one is constantly plunged in a bath of wet linen, or, when one is naked, in a layer of water that does not evaporate; and one is obliged to perform ablutions and change one's clothes three or four times a day. The latter are hung up in the apartments to dry, which contributes to the dampness and coolness of the air in the rooms. This in its turn renders the body cold, which, added to the fatigue of the day and sleepless nights, reduces the power of resistance of the body, and causes it to become more liable to contract the fevers of the locality." Dr. Nicolas makes out that in all his travels he never experienced anything like the heat of Panama, though he has been in many places situated near, or on, the equator—not that the temperature is exceptionally high, but it is of a stuffy and enervating character. This enervation is manifested by the "powerlessness of cerebration" and blunting of the memory, as well as by sleeplessness, which condition is almost permanent and produces a state of cerebro-spinal irritability, followed by depression of spirits and its attendant evils. As regards the lassitude that is felt, the author suggests that the pathology of that resulting from fevers is identical with that attending fatigue, and that the state of the nervous tissue approaches to that of the muscles, which are loaded with the waste elements of the organism which the urine or the perspiration were powerless to eliminate. After painting the country in such sombre colors, Dr. Nicolas, in his patriotism, nevertheless recommends the undertaking now in progress at Panama to the consideration of his countrymen, "as it is a national work and the whole world has its eye thereupon."

Whatever may be the ultimate result of M. Pasteur's anti-rabic inoculations, M. Pasteur himself is being covered with honors, and money is flowing in from all sides for his institute. About a week ago he received a medal from the Humane Society of the Seine, which was handed to him at a meeting of the Society at the Sorbonne, and under the presidency of the Minister of Public Instruction. Several government functionaries and members of Parliament were present, and M. Anatole de la Forge, the well-known deputy, in presenting M. Pasteur to the Society in company with M. de Lesseps, expressed himself to the effect that these two illustrious men have deserved well, not only of their own country, but of the world at large, for their persevering exertions for the benefit of mankind in general, though the bent of their genius has been turned in different directions.

The subscriptions for the institute amount to this date to 1,194,182 francs, as shown by the official journal. This sum includes 400,000 francs voted by the French Parliament. The Paris Municipal Council, however, has not only displayed less generosity in a pecuniary way, but has also taken every opportunity of throwing a damp on M. Pasteur's efforts, as some of the members are somewhat sceptical as to the real value of M. Pasteur's discoveries.

INFLUENCING SEX IN UTERO.

To the Editor of The Medical Record.

Sir: From time to time communications appear on the topic of influencing the sex of a child *in conceptione*. It is a very old topic, and always an interesting one, though its solution is surrounded by many delicate obstructions that appear almost insurmountable. Its honorable study, in my judgment, is no more an impropriety than is the study of any other topic connected with the physiology of generation.

I have no new theory to present, nor any old one to defend. This, like any other problem in science, is not to be determined by theoretical opinions, except as such opinions are established by numerous facts which are in themselves accurate, without coloring, without contortion. Some facts that I have carefully collated during a practice of thirty-five years may be interesting.

Making the common-place observation that some parents had only girls, while others had only boys, I was prompted to seek for all attainable information as to circumstances or conditions that might influence the generative system to these results. In one family the following facts were obtained: Seven boys had been born and no girls. The wife died, the husband married again, and to him the second wife bore four girls and no boys. The two wives were nearly identical in build and temperament; the husband was a man of medium size and very healthy. This father was one in a family of four boys; the first wife was one in a family of five girls and one boy; the second wife from a family of two girls and three boys. The first wife habitually went to sleep early in the evening, on a sofa; awoke when her husband came from business, and retired with him about 10.30 to 11 P.M.; rose an hour or more before the husband in the morning, he being a late sleeper. The second wife was a great reader; seldom retired till after midnight, the husband having been in bed and asleep for an hour or more; and she commonly arose about an hour after the husband in the morning.

Knowing these circumstances, it occurred to me that cohabitation with the first wife probably took place when they retired in the evening, and with the second wife in the morning. Venturing on suitable inquiries, I learned from the husband that my surmise was correct, the habits of the two women probably not varying these respective times of congress.

"One swallow does not make a summer;" nor do marital peculiarities in one family establish a physiological rule. The above, which may be numbered as Case I., is but a single instance in a series that has come under my observation. A few from the list may be mentioned briefly.

Case II.—H——, owner of a bakery, arose between 2 and 2.30 A.M., leaving his wife asleep; usually lay down soon after his evening meal and took a nap, and retired with his wife about 9.30 P.M. They had six boys and no girl. He informed me that he probably never had had connection except in the evening hour, soon after retiring.

Case III.—C—— was a merchant, fond of going to his club about 9 P.M., and returning about midnight. The wife usually retired about 10.30, rarely knew when the husband came to bed, and the two rose quite late in the morning. Five girls were born, but no boy. Then his business and place of residence changed, he was beyond reach of his club, and then usually retired with his wife about 10.30. After this change in life, three boys were born, but no girl. He told me his habits led to marital indulgence in the morning during the years when the girls were born, and in the evening when the boys were born; and he thought these times of cohabitation had not varied during those respective periods.

Case IV.—K—— had three sons and three daughters, born in interrupted order as to their sex. He told me his wife announced her consciousness of each conception within half an hour after the fruitful intercourse, from sensations that to her were satisfactory; and she had kept a record of them all, partly from curiosity and partly as data in preparing for confinement. He kindly obtained from her, and gave to me, a copy of this record. It showed the conception of the three boys as having occurred respectively at 10, 10.30, and 10.30 P.M.; and of the three girls at respectively 5.30, 5.30, and 6 A.M.

Case V.—Mrs. R——, a widow at the time I made inquiry, was mother of three boys and one girl. She told me she knew positively that the three boys, born consecutively, were conceived in the evening; and that the one girl was conceived in the morning. Delicacy forbade questioning as to details.

Case VI.—Mrs. M——, an extremely punctilious lady, was mother of a daughter, two sons, another daughter, another son. She said she knew, in the most unquestionable manner, the moment of each of these five conceptions; and that the conception of the two daughters occurred in the later morning hours before rising, and those of the three sons in the evening hours soon after retiring. The husband said she announced to him, in peculiarly emphatic terms, the fact of each conception within a few minutes after its occurrence.

These six cases are typical of seventeen others within my knowledge, all equally clear. To give the other seventeen in detail would be merely cumulative. In yet fifteen other families, the general data bear out the same thought, but are not equally definite. They years ago gave me the belief that male children are conceived in the evening, before the midnight hour; and that females are conceived in the morning hours. To help confirm this belief are the following: In thirty-five years of professional life, I have attended in a number of cases where children were born out of wedlock. In nineteen (19) of these cases the mothers gave me full information as to the hour of fruitful connection. Sixteen of these nineteen children were boys. Thirteen of these boys were conceived between the hours of 10 and 11.30 P.M.; two were conceived between 4 and 5 P.M.; and the other about 7 P.M. Three of the nineteen were girls, and these were conceived, respectively, about the hours of 2 A.M., 4.30 A.M., 6 A.M.

A few opportunities have arisen for testing the correctness of my view, and thus far they seem to sustain it. Mr. C. E.'s lady had three girls in succession, and he consulted me as to the possibility of perpetuating the family name through a boy. I advised adherence to evening congress, strictly. He said his habit had been chiefly, though not invariably, in the morning; and possibly this accounted for three girls. My suggestion was followed rigidly for five years, during which time two boys were born to him; after that he did not adhere to the evening hour, and a girl was born. In two other instances I gave the same advice; it was followed, and boys were born. In one instance the morning hour was advised and followed, and a girl was born. In other instances my advice was not adhered to with sufficient exactness to be of value, though apparently sustaining my view.

I offer no theory in the matter, for the data are not sufficient. In the above cases, and in a much larger number of others, it would seem that the wife has altogether the least responsive feelings in the morning, and most in the evening. This may not be at all uniform with wives; and even if it were uniform, it may not influence the sex of the child. I merely offer the few facts I have gathered, presenting only those which are clear and determinate. Perhaps they will not correspond with information gathered by other gentlemen, although they coincide with facts imparted to me by a few professional friends, to whom I have mentioned my views within the last twelve years. It would be interesting to know if the profession at large has any clear data on this line of thought; and whether the sum of such informa-

tion sustains, throws into doubt, or quite overthrows my idea that boys are conceived before midnight, and girls in the morning hours.

WM. H. COOK, M.D.

CINCINNATI, O.

THE CURE OF HICCOUGH BY SNEEZING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It may be gratifying to Dr. Robert B. Wilson to learn that his treatment of singultus is classical, and was recommended by Hippocrates, as the aphorism given below will show. The following appeared in the April, 1886, number of the *New York Medical Abstract*, and was credited to Dr. G. A Gibson in the *Edinburgh Medical Journal* of the same month: "No doubt many of my professional brethren are acquainted with the Hippocratic aphorism 'Υπὸ λυγμοῦ ἐχομενω πταρμοὶ ἐπιγενόμενοι λυουσι τὸν λυγμόν,' 'Sneezing occurring after hiccough removes the hiccough,' or, as it is rendered by Adams, 'Sneezing coming on in the case of a person affected with hiccup, removes the hiccup.'" When devoting a leisure hour to Plato's Dialogues, as translated by Jowett, I was struck by a passage in the Symposium, which had never arrested my attention before. Translated by Jowett, it stands thus: "When Pausanius came to a pause, Aristodemus said that the turn of Aristophanes was next, but that either he had eaten too much, or, from some other cause, he had the hiccough, and was obliged to change with Eryximachus, the physician, who was reclining on the couch below him. 'Eryximachus,' said he, 'you ought either to stop my hiccough, or to speak in my turn until I am better.' 'I will do both,' said Eryximachus; 'I will speak in your turn, and do you speak in mine; and while I am speaking, let me recommend you to hold your breath, and if this fails, then to gargle with a little water; and if the hiccough still continues, tickle your nose with something and sneeze, and if you sneeze once or twice, even the most violent hiccough is sure to go. In the meantime I will take your turn, and you shall take mine.' 'I will do as you prescribe,' said Aristophanes, 'and now get on.'" The hiccough was not cured by the first nor by the second remedy suggested by Eryximachus, but by the production of sneezing. The method of tickling the nostrils has been tested by us in cases of obstinate hiccough, and has been very successful. It is not necessary that the stimulus applied to the nose be followed by sneezing; the application of a gentle irritant to the nasal mucous membrane may be quite enough to put a stop to the hiccough, by diverting the nervous energy into other channels, although it may not be of sufficient power to induce sneezing. Yours truly,

J. BURNETT, M.D.

SCRANTON, PA., June 7, 1886.

LAPAROTOMY IN ABDOMINAL WOUNDS.

TO THE EDITOR OF THE MEDICAL RECORD.

MY attention has just been directed to an article, "Laparotomy in Abdominal Wounds," in your issue of May 8th. It is astonishing how "chaotic" is the notion of many Europeans relative to America and her works, but in reality, the notion of some few in the East, relative to the West, is not remarkably less "chaotic." In answer to *The Lancet*, THE MEDICAL RECORD, in an editorial, is satisfied by simply stating: "It is very well known to American surgeons that it was the cases of Dr. W. T. Bull, and subsequently those of Dr. J. B. Hamilton and others, which specially turned attention in this country to laparotomy for abdominal wounds." The case of Dr. Bull was published in the month of February, 1885; that of Dr. J. B. Hamilton, in September, 1885. Previous to this, however, in the spring of 1884, at the meeting of the American Medical Association at Washington, Professor C. T. Parkes, of Chicago, read a paper, presented diagrams—living and anatomical specimens of the result of an extensive series of experiments on dogs. These experiments were made with the avowed purpose of ascertaining what should be done in gunshot wounds of the intestines. The animals were shot, the abdomen opened, the wounded parts of the intestines treated with appropriate surgical methods, and the external wound closed—in fact just such treatment adopted as, the necessary changes being made, would suggest itself to any surgeon now when confronted with an abdominal wound associated with indications of a perforation of the viscera. It would seem as though, in correcting the statements of a European journal, that an American journal would take some cognizance of the labors of the men in the western part of America. The article detailing the particulars of these experiments of Professor Parkes, was published in full both in the *Medical News*, and in the *Journal of the American Medical Association*. I mail you a copy of the reprint. We do not think THE MEDICAL RECORD means to discriminate between the East and West, and that it will accord this short notice in the cause of accuracy. To show that some did not fail to see the bearing of Professor Parkes' observations on abdominal surgery, we venture a short extract from a lecture by Professor W. W. Keen, of Philadelphia, and published in the *Popular Science Monthly* for May, 1885. "In May of last year, Parkes, of Chicago, reported to the American Association a series of systematic experiments on thirty-seven dogs, that were etherized, then shot, the abdomen opened, and the wounds of the intestines, arteries, mesentery, etc., treated by appropriate surgical methods. The result confirmed the belief awakened by earlier experiments and observations, that surgery could grapple successfully with multiple and formidable wounds, by sewing them up in various ways, or even by removing a piece of the bowel and uniting the cut ends. Hard upon the heels of this important paper, and largely as its result, comes a striking improvement in practice. . . . November 2d of last year, a man was brought to Chambers Street Hospital, in New York, with a pistol-shot wound of the abdomen. Under careful antiseptic precautions, and following the indications of Parkes, the abdomen was opened by Dr. Bull."

ROBERT TILLEY.

June 27, 1886.

QUININE IN TYPHOID FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: We do not intend "to beard the lion in his den," nor anything especially audacious, in entering this mild but decided protest against the too sweeping remarks of Dr. George M. Dewey, as quoted and largely indorsed by your journal in its issue of May 22, 1886.

The closing remarks of the editor in reference to the routine use of quinine and other antipyretics in continued fevers are timely enough; but taking the article as a whole, the inevitable bearing it has is to drive a large number of readers entirely from the use of that drug in the treatment of typhoid fever.

Such a scare was not needed in a large scope of Georgia territory, where every fall the "busy practitioner" meets more or less of this tedious malady.

Within the last decade—certainly embracing the period during which quinine and other antipyretics have been used directly with the view of combating dangerous temperature—we have not known an instance wherein we were assured that it was being used prejudicially to recovery in typhoid fever.

There are many instances of it, doubtless, for the world is abundantly sprinkled with routine and extremist doctors. To the latter class, in all sincerity, we would certainly relegate any medical man who could to-day write —"The Utter Worthlessness of Sulphate of Quinine in Typhoid Fever."

Thirty years' experience in watching the behavior of the fever in question, with little medicine, with no medicine, and with quinine, and plenty of it, overwhelmingly convinces us of its very great value in the treatment of typhoid.

With all that has been written on it, from Hutchinson to his critic Dewey, the profession is largely at sea about the treatment.

Within the last ten years we have often had occasion to observe the unsettled and indefinite views of many members of the medical profession as to its pathology and clinical history. Not a few have failed to discover that a man ordinarily has the disease but once in life.

One and another has scarcely discerned that his too vigorous cathartic, with which he opened the case, has produced complications ever afterward beyond his control; that the patient who passes the night without morphine and without rest will inevitably report worse the next day; and now, seemingly, we would infer from Dr. Dewey, of Maine, that a protracted high temperature means only tissue waste, and finds its proper antidote in "sweet milk." Hutchinson deserved the rebuke given by his less distinguished reviewer, but for not advising quinine in larger doses. During the many years we have been giving it in large doses in typhoid fever and with the most gratifying results, we have not found *any* good in the use of it in "three- or four-grain doses four times a day." Nor do we use it at all until the temperature passes 102°, and shows a plain tendency to go higher. But when the exacerbations, daily, in general, mount up to 103° or 104°, to the manifest distress of the patient and the production of visceral congestions, fraught with structural changes of a vital nature, to say nothing of the tissue waste inseparable from such a "fast life," we give a capsule containing eight to ten grains of quinine every four hours, beginning early in the morning and repeating till three are taken—then discontinuing until the following morning, and so on, with more or less variation, suited to difference in constitution and environment, until the temperature stands again at a figure compatible with the patient's comfort and safety. The happiest results have followed, and no one is more cognizant of the source of relief than the taker himself, who, as such, is apt to be in pretty good possession of his faculties. A temperature that may be followed for many days without serious injury to the organism in one case, will jeopardize life in the next.

E. P——, a robust farmer, aged thirty-five, confined to the bed for one week—seen for the first time—remarks: "My fevers have been very high and made me feel bad; I don't think I have any now, and am feeling better." A corrected thermometer, placed under his tongue three and a half minutes, reveals a temperature of 104°.

Mrs. M——, a lymphatic lady, with small, soft pulse, aged fifty, has been under observation ten days. Has typhoid fever, temperature not exceeding 102° in the exacerbation. Second week, temperature averages a little higher daily, until it reaches 103½°, during the acme of the exacerbation, and she is in extremities, and every symptom threatening.

An eight-grain capsule of quinine, given every four hours till the temperature is 102° in the hot stage, makes her not only comfortable, but removes every symptom of impending visceral complication.

Of course we recognize and take it for granted, in the discussion of this question, that it is conceded by all, that the essence of the disease is intestinal eruption, splenic congestions or engorgements, and internal hyperæmia everywhere; and in speaking of visceral complications we mean to refer to the exaggerated and disorganizing degrees of these lesions. Time and again, self-accused, we have thought perchance we were drifting into that professional Slough of Despond that knows no excelsior cry, viz., routineism, and have put the stopper in our Powers & Weightman and let it remain there day after day and visit after visit; and have as often been reminded to return to it, and in doing so have realized that fortunate state of being in happy accord with our client.

A mere record of recoveries may be a very narrow view of medical progress, but, as a test of good therapeutics, strikes with some force both in the profession and the laity. To jump theories and circumlocution and call for results is truly American. Measured by this rough and ready rule, an experience of the last ten years, with constantly enlarging opportunities for exhibiting the drug in sporadic and endemic features of the disease, pronounces strongly in favor of sulphate of quinine as a remedy of inestimable value in the treatment of that form of continued fever generally known as typhoid.

As to the nosology of typho-malarial fever we are in perfect agreement with the article referred to in the issue of May 22d. The malarial "tail" has no practical bearing, only as it serves to delude some shallow thinker into modifying his plan of treatment. For whoever treats his so-called typho-malarial case differently, or with an eye less singly directed to the main life-imperilling lesions, because of this doubtful appendage "malarial," will, except he is rescued by the kind offices of that great conservator—the natural tendency to recovery—meet with eminent defeat.

In the treatment of typhoid fever, as in every disease of possible gravity, we try to approach the bedside with no preconceived ideas as to diagnosis or treatment. On each separate visit we would let the clinical facts alone account for the day's medication, keeping steadily in view Thomas Watson's great injunction, "*the tendency to death.*"

Proceeding thus, we have found it abundantly profitable to give veratrum and aconite, and always associated with an opiate, mostly morphine, to procure rest and calm an excited circulation; cold alkaline baths and frequent changes of linen, preferably administered (the bath) during the exacerbation, for general hygiene; "sweet milk" with or without whiskey for feed, and *quinine* in emphatic doses whenever the temperature produces notable discomfort or threatens to produce dangerous complications in the run of the fever. Barring the accidents of profuse hemorrhage, or intestinal perforation, recovery has been the rule.

HARRIS FISHER, M.D.

EASTMAN, GA., May 29, 1886.

ANÆSTHETICS IN CHILD-BIRTH, FROM A RELIGIOUS POINT OF VIEW.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: A prominent physician of this city lately requested me to express my opinion as to whether there were any religious objections to the application of anæsthetics during delivery. The reason for this request was, that ladies in travail often refused to be placed under the influence of chloroform, on the ground that such practice was against the words of the Bible: "In sorrow (pains) thou shalt bring forth children."

As other physicians, probably, sometimes meet with similar objections on that ground, I beg leave to say a few words on this subject.

It is true that the words just referred to are found in the Book of Genesis, ch. iii., verse 16, as having been addressed by the Lord to mother *Eve*. But these words must by no means be taken literally as a divine *command* to every woman, so as to make it a duty for her to suffer the pains and pangs of parturition without being permitted to apply means to alleviate them, or to become insensible to them. In the same passage of Scripture, in which these words are addressed to the first woman, as a penalty imposed on her because of disobedience, we also read the words directed to the first man: "In the sweat of thy face shalt thou eat bread." Now, if we are to take the former words literally as a divine injunction to every

woman, we must do the same with the latter words addressed to man, so as to make it sinful for everyone to eat bread, except in the sweat of his face. But no religious man ever scrupled to dry the sweat of his brow before eating his bread, or to eat a morsel before his face was bathed in perspiration.

The Jewish religion never attached to the narrative of the so-called *Fall of Man* that importance which Christian theology attached to it by basing thereon the doctrine of Redemption. Rational interpreters of Scripture in the Middle Ages already were inclined to divest that narrative of its literal sense, and regard it as a sublime allegorical legend intended to illustrate sin's origin, its progress, and its evil consequences. In accordance with the general view of Holy Writ, that moral causes are underlying all events and occurrences of human life, man's usual toils and troubles in gaining his sustenance, and woman's cares and sorrows connected with her maternity, are here represented as consequences of disobedience against the divine will. If we look upon that narrative in this light, the words "In sorrow shalt thou bring forth children" are as little a divine commandment as the words "In the sweat of thy face shalt thou eat bread," but both sentences are rather a description of what usually happens to woman and to man. In this light even the ancient Rabbis viewed that passage. For, while pointing out all commandatory and prohibitory laws of the whole Pentateuch, to the number of 613, they wisely refrained from counting the words just referred to among those laws.

Although the use of anæsthetic agents (soporific potions) under surgical operations was not unknown in antiquity, and is occasionally even mentioned in the Talmud (B. Metzia, fol. 83^b, where it is termed *Samma d'shina*, somnific drug), still the practice of applying such agents to women in travail is of too recent an origin to have been considered by the ancient Rabbis. Had they known it, they would certainly not have objected to it, as they expressly provided that the criminal, before an execution, should receive a narcotic potion, which the noble women in Jerusalem used to prepare for him in order to be rendered insensible to the sufferings of a capital punishment (Talmud Sanhedrin, fol. 43^a). If he who was to suffer death to atone an atrocious crime was permitted to be rendered insensible to his deserved suffering, what wrong can it be for our good and tender ladies to be placed under influences that remove from them the pains and pangs of maternity?

M. Mielziner, M.D.,
Professor in the Hebrew Union College.
Cincinnati, O., June 8, 1886.

The Drug Business in Kansas.—A student in the Michigan University recently applied to the proprietors of a drug store in a Kansas town for a position as prescription clerk. In reply he received the subjoined letter, which is printed just as it was written, except that the names of the town and of the firm are suppressed. It throws some light on the operations of the prohibitory liquor law in that State: "Dear Sir yours Recd in Reply i will Give you a Brief Description of our Business Perhaps you understand the nature of a Drug Store in knansas we Do Some liquor Business in a Back Room By the Drink our Prescription trade Runs from two to three thousand Pr year Some Clerks objects to the Back Room trade I Give you the facts in the case So that you will not be Disappointed your Board By the week will cost you from $3.50 to $5.00 a week now if you accept this Position answer By telegraph at once as I kneed a clerk very bad & must have one as Soon as Possiable. Yours truly"

For Excessive Perspiration of the Hands, washing with a saturated solution of boracic acid is often effective.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 27 to July 3, 1886.

McParlin, Thomas A., Colonel and Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 146, A. G. O., June 25, 1886.

Page, Charles, Lieutenant-Colonel and Surgeon. Leave of absence extended ten days. S. O. 146, A. G. O., June 25, 1886.

Magruder, D. L., Lieutenant-Colonel and Surgeon. Granted leave of absence for two months, to take effect on or about July 1, 1886. S. O. 146, A. G. O., June 25, 1886.

Vickery, Richard S., Major and Surgeon. Assigned to duty as Surgeon in Charge of Army and Navy General Hospital at Hot Springs, Ark. S. O. 150, A. G. O., June 30, 1886.

PROMOTION.

Brown, Joseph B., Lieutenant-Colonel and Surgeon. To be Surgeon with the rank of Colonel. January 24, 1886.

Heger, Anthony, Major and Surgeon. To be Surgeon with the rank of Lieutenant-Colonel. January 24, 1886. Circular, A. G. O., June 28, 1886.

Official List of Changes in the Medical Corps of the United States Navy during the week ending July 3, 1886.

Green, F. H., Passed Assistant Surgeon. Ordered to Naval Laboratory at Brooklyn, temporary duty.

Brown, J. M., Medical Director. Member of Retiring and Examining Board.

Ogden, F. N., Assistant Surgeon. Ordered to Juniata.

Siegfried, C. A., Surgeon. Three months leave abroad.

Hall, J. H. H., Passed Assistant Surgeon. Detached from Museum of Hygiene, ordered to Naval Hospital at Brooklyn.

Wentworth, A. R., Assistant Surgeon. Detached from St. Louis and ordered to the Brooklyn.

Corbin, J. Decker, Assistant Surgeon. Ordered to St. Louis.

Berryhill, T. O., Assistant Surgeon. Ordered to Museum of Hygiene.

Neurasthenia and Abdominal Belts.—The inhabitants of this globe, says *The Lancet*, may suffer from nervous weakness, or neurasthenia, simply because they neglect to wear abdominal supports. At least that is the conclusion that naturally follows from the recent teaching of M. Glénard, of Lyons, who believes that some cases of nervous exhaustion are attributable to gastroptosis, or lowering of the stomach; to hepatoptosis, or descent of the liver; or to nephroptosis, which is another name for floating kidney. Imagine the following colloquy in a physician's consulting room: Patient: "And now, doctor, after all this sounding and examination, pray tell what is the matter with me." Physician: "My dear sir, you have habitually bolted your meals, which have likewise been too abundant; as a consequence you have caused your stomach to descend from its natural situation—*facilis descensus Averni*—and this gastroptosis, as we call it, has acted seriously on your nervous system, hence your languor, irritability, and general loss of tone, etc. My advice to you is to read 'Strapmore,' put on an abdominal belt, and cultivate a waist!"

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 3, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 3, 1886.....	1	11	20	5	57	84	0	0
Deaths.								
July 3, 1886.....	0	2	4	5	7	30	1	0

COCAINE is of no value in sea-sickness.

PHTHISIS AND THE NEGRO.—According to Dr. F. Tipton, of Selma, Ala., before the war, the negro never had phthisis, now it is the greatest scourge among them.

THE NEGRO FROM A MEDICAL STANDPOINT.—The negro is rarely or never myopic. Their only eye trouble is phlyctenular conjunctivitis. They rarely have granular lids. The negro bears surgery remarkably well. Syphilis in the negro is generally very mild. One half of all negro men have syphilis, and it does not seem to seriously hurt them. Gonorrhœa is easily cured in the male. In the female it does most harm, causing endometritis and sterility. The negresses often have uterine fibroids, but very rarely ovarian tumors. Uterine cancers are very rare, although lacerations of the cervix are very common. Insanity is rare.—DR. TIPTON in *N. Y. Medical Journal.*

THE ANCIENT PRIESTS AND THE MICROCOCCUS PRODIGIOSUS.—In using the potato as a growth-medium for micro-organisms, Koch imitates the priests who in old times scratched some religious symbol with a needle-point upon a potato, and presented it to people, who were astonished some days after to find the symbol in blood-like letters on the surface of the potato. The priests made use of a fungus known as the prodigiosus, whose chief characteristic is a purple, blood-like growth. Cut open a potato and, with a needle dipped in the fungi, trace a line upon the newly-cut surface; some days later the line will appear in dark purple. Koch uses the potato for various growths.

THE MICROBES IN MILK AND WATER.—It has been calculated that in a cubic centimetre of milk—about twenty drops—there may be between 2,000,000 and 3,000,000 microbes, and possibly hundreds or thousands of different kinds; and the next twenty drops of milk may contain as many more varieties. The microbes in a drop of water taken from the well may consist in a number of straight rods; at the end of an hour these rods break in two, and in another hour another division takes place, the number doubling about every hour. Every minute that the water is exposed to the air adds to its hundreds of microbes, and yet water is pronounced good or bad, according to what the analyst sees through his microscope or thinks he sees when the water finally reaches him in his laboratory.

POST-DECAPITATION PHENOMENA.—Professor Martin (*Centrl. f. d. Med. Wiss.*, November 14, 1885), remarks that he once was present with Professor Rossbach at a decapitation where the division occurred between the fourth and fifth cervical vertebra. The trunk dropped down lifeless and with every muscle relaxed, simply obeying the law of gravity, while the head continued for one and a half minute to make dyspnœa-like respiratory motions, just like a person who, when suffering from the most intense dyspnœa, would endeavor to breathe.

BRUISES.—Dr. S. M. French recommends an ointment of equal parts of extract of belladonna and glycerine for the relief of the pain following a bruise.

STERILITY AND OBESITY.—Dr. A. Brondel writes in the *Bulletin Général de Thérapeutique* that he was consulted by a married lady on account of sterility, which caused her great unhappiness. The lady was excessively corpulent, so much so that the nurse was obliged to lift up the fat on the mons veneris with both hands before a speculum could be introduced. The genital organs were healthy. The patient was placed on a spare diet in order to reduce her obesity, and persevered in the regimen ordered for eighteen months, at the end of which time she had lost forty-four pounds in weight. The menses, which had formerly been irregular, returned, and the patient soon after became pregnant.

CHEWING-GUM AS A FATTENING AGENT.—A Southern secular paper is authority for the following statement regarding the fattening effect of chewing-gum: "Twenty years ago the rule was the Southern women were thin and delicate; it is not the rule now. Southern women are not physically equalled in all North America. Any physician who is as well informed as he ought to be, will tell you that this is true. This change is due to the habit of chewing gum. You may smile, you may even laugh if you please, but I am telling you a plain fact. As to Southern men, they are as thin and gaunt as they ever were, and so they will remain until they cease to chew tobacco and begin to chew gum."—*Medical and Surgical Reporter.*

REPORT OF THE MISSION HOSPITALS AT SWATOW AND UNG-KANG-FU.—We have received the reports of these hospitals for the year 1885. The institutions are under the care of Drs. P. B. Cousland and J. F. McPhun. At Swatow 5,637 patients were received, 3,867 of whom were in-patients. There were 944 operations performed. At the hospital in Ung-Kang-Fu, under the care of Dr. Riddel, there were 2,620 patients treated, of whom 400 were in-patients; 180 operations were performed, including 23 teeth extractions. Instruction was given to a class of native junior assistants and pupils in materia medica and therapeutics during the fall and winter, the students being taught the Latin names of the drugs. The religious work of the hospitals is reported to have been moderately successful.

SCIENTIFIC ARDOR OR OBSTINACY?—Some of the female medical students in Boston would seem to require instruction in ladylike deportment as much as in medicine. The *Boston Medical and Surgical Journal* says that there have been some scenes in the operating-room of the City Hospital, during the last few weeks, which were not calculated to inspire the beholder with chivalric sentiments toward the female sex, as represented among the students of one of the medical schools of the city. In defiance of the distinct rules of the trustees regarding admission to the operation, certain women have repeatedly forced themselves into the seats, even during the performance of private operations upon the private parts of private male patients, so that the operator was obliged to remove his patient to another room. This course was continued even pending action by the trustees of the hospital on demands of the petitioners.

POISONOUS FISH.—In an article on "Poisonous Fish, and Fish-poisoning in China," in the *Chinese Recorder* for February, 1886, Dr. D. J. Macgowan says, that the flesh of the porpoise is regarded as one of the greatest delicacies, but that it is apt to be exceedingly poisonous, many persons dying every year from eating it. All cases of fatal poisoning, however, appear to be due to neglect of certain precautions that should be observed, as the rejection of certain portions of the fish, and long boiling of the part that is to be eaten. The symptoms are those of paralysis of the extremities and tympanites.

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Original Articles.

THE USE OF COCAINE IN GYNECOLOGY.[1]

BY GEORGE WOODRUFF JOHNSTON, A.M., M.D.,

WASHINGTON, D. C.,

PROFESSOR OF OPERATIVE GYNECOLOGY, MEDICAL DEPARTMENT OF COLUMBIA UNIVERSITY; GYNECOLOGIST AND OBSTETRICIAN TO CENTRAL DISPENSARY AND EMERGENCY HOSPITAL; MEMBER OF THE ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL IN THE STATE OF NEW YORK.

MANY new drugs and preparations have been introduced to the world of late years. Announced by their discoverers or manufacturers in the most boastful and pretentious terms, they have enjoyed a transient notoriety and then have speedily been forgotten. Cocaine, however, offers a most remarkable exception to this rule. Vaunted by the public press and by the members of different branches of the medical profession as peculiarly suitable to the treatment of each of a variety of pathological conditions, differing widely as to nature and location, in spite of its popularity it has lived, and enjoys to-day a degree of confidence rarely meted out to any single pharmaceutical preparation. That this confidence is justly deserved no one can doubt who has had any extended experience with the drug. Indeed it may be said with truth, we believe, that no such valuable addition has been made to our pharmacopœia since the discovery of ether, of which, curiously enough, it has become a dangerous rival. In view of all this it is much the more to be regretted that the isolation of so valuable an anæsthetic as cocaine cannot be clearly and without question attributed to one individual. The weight of opinion, however, seems to be in favor of Niemann as the one "who first (1859) gave to cocaine a certain amount of physiological individuality," although the claims of Percy and Gardeke are not without an appearance of truth and justice. Be this as it may, its value as a local anæsthetic was, after a considerable interval of time, systematically tested by Koller (1884) in the eye, and Jelinek (1884) in the throat, with results in both cases most eminently satisfactory. To Fränkel, of Breslau, perhaps, more than any other, is due the credit of first (1884) calling the attention of gynecologists to its value, and recommending its use in the treatment of many of the diseased conditions found in women. Since then its efficacy has been tested in a variety of conditions calling for the production of limited surface insensibility. So far as we are aware, aside from reports of its effects in a few individual conditions, and broad generalizations as to the limit of its value in the diseases of women, American gynecological literature is barren of information in regard to cocaine. It has not been the fortune of the author to meet anywhere with an account of a systematic series of experiments in regard to the range of its adaptability, and many points which could be settled only by collective investigation remain unsettled. It is the object of this paper to present a brief outline of as much as possible of what has been written in relation to the employment of cocaine in gynecology, and to add the histories of a very few and widely dissimilar cases in which is to be read nearly the sum total of the author's own experience with the drug in the diseases of women. Such a contribution will, the author believes, not furnish, but aid to a slight degree, some others in furnishing the results of a complete, accurate, and satisfactory study of cocaine in its relations to gynecology, so that this drug, whose value has not been even yet generally or fully appreciated, may reach thereby the full measure of its usefulness.

There are many purposes in gynecology for which anæsthesia is employed. It is often impossible to make a complete and satisfactory vaginal examination, for the nervous system is always very irritable in affections of the genital system without its aid, and there are but few operations which can be performed unless preliminary surface insensibility, and hence, some degree of general muscular relaxation, have been secured. Under the term reflex cramp of the muscles of the pelvic floor,[1] a variety of conditions have been described which serve to render adequate diagnosis, or the employment of local treatment, painful, difficult, or impossible. Mere reflex cramps, originating in mental or physical excitation of a local era of hyperæsthesia, situated at some point at or near the urethral, vaginal, or rectal outlet, in women who are anæmic and neurasthenic, manifest themselves as painful spasms of one, a group, or of all the muscles of the pelvic floor. The forced contracture of those ring muscles or sphincters which serve, when in a state of health, to maintain a proper degree of tonicity in the walls and at the outlets of the three pelvic floor-clefts, accentuates the prevailing degree of tonicity or markedly exaggerates it, until closure of these canals, more or less absolute, supervenes. Irritation of the local areas of hyperæsthesia and contraction of the muscles of the pelvic diaphragm are accompanied by pain, amounting in some cases to the extremest agony, which is entirely out of proportion to the nature or degree of either the irritation or of the muscular spasm. The most gentle attempts at separation of the labia, or introduction of the examining finger, will often call forth greater pain and more marked muscular contraction than the roughest manipulation. To properly appreciate the especial cause of these reflex cramps, and often to institute appropriate methods of treatment, anæsthesia is necessary. To meet these indications ether, in this country at least, has been generally employed, and to secure a few moments' insensibility to pain and muscle relaxation, it has been necessary to submit patients to the inconveniences of etherization.

If we are to rely on the testimony of reported cases, however, its use is no longer necessary. Its place has been largely taken by cocaine. By the aid of the latter drug, without the slightest constitutional disturbance, we are enabled, it is said, to thoroughly overcome any local hyperæsthesia or sphincteric contraction there may be, thus rendering accurate and complete diagnosis possible, while suitable therapeutic procedures may be at once successfully and painlessly instituted.

It is stated that in cocaine we have a cure for vaginismus. Reflex painful cramp of the sphincter vaginæ (constrictor cunni) muscle, when proving a cause of dyspa-

[1] Read at a meeting of the Washington Obstetrical and Gynecological Society, June 18, 1886.

NOTE.—For an account of the early history of the employment of cocaine and many points of interest connected with it, see Koller, Wien. Med. Wochenschr. 1884, No. 43, u. 44; Jelinek, Wien. Med. Wochenschr., 1884, No. 45 u. 46; Percy, THE MEDICAL RECORD, New York, 1884, xxvi. 550; Editorial, THE MEDICAL RECORD, New York, 1884, xxvi., 518; also, ibid., 659; Knapp, Cocaine and its Use in Ophthalmia and General Surgery (New York and London, 1885); Hergott, De l'Emploi de la Cocaine en Obstétrique (Ann. de Gynéc., Paris, 1885, xxiii., 81–97); also, Revue Méd. de l'est, Nancy, 1885, xvii., 199–212; Weiss, Med. Chir. Centralbl., Wien, 1885, xx., 266–263; also, Prag. Med. Wochenschr., 1884, ix., 497–499; Fränkel, Ueber Cocaïn als Mittel zur Anästhesirung der Genitalschleimhaut (Centralbl. f. Gynäk., Leipzig, 1884, viii. 777–780); Corning, Local Anæsthesia in General Medicine and Surgery, etc. (New York, 1886).

[1] Hildebrandt: Archiv. f. Gyn., Bd. iii., S. 221. Also, Die Krankheiten der Aeusseren Weiblichen Genitalien, Billroth's Handbuch, Stuttgart, 1877, cap. x., p. 103.

reunia, may be done away with by the use of cocaine in solution, oleate, or suppository; but unless the cramp is due to a condition likely to be removed by forced sexual congress, the employment of cocaine will prove of but temporary service. For in some, if not the majority of these cases, the lesion producing the reflex cramp will be aggravated by sexual intercourse, even though sensation in the parts be dulled, and after the temporary effect of the drug has passed away it will be discovered that connection is just as painful or impossible as before. It was found, in the interesting cases narrated years ago by Sims, that "ethereal cohabitation" was worse than useless; and, although the anæsthesia of cocaine may also permit of complete and satisfactory sexual congress, it will no more cure the disease than will intercourse with the patient under the influence of ether. It is therefore only in certain conditions, as, for example, when an unyielding hymen or a too narrow vaginal orifice offer a mechanical barrier to defloration, that its employment is at all justifiable. For it is very well known that cocaine can have little or no direct local effect in the cure or removal of those pathological conditions located about the vaginal outlet which give rise to reflex spasm; that these lesions are made worse, not better, by forced manipulation or intercourse, even under a local or general anæsthetic; that the much sought after pregnancy ending in labor aggravates and does not benefit them, but that rest is the absolute preliminary to their proper treatment. And, further, in many cases this vaginismus may be not the symptomatic expression of disease located at the vulva or vaginal outlet, the area covered on the application of the drug, but of a lesion, relatively speaking, far removed from the seat of spasm, and totally unaffected by the local anæsthetic. From what has been said, therefore, it may be concluded that in cocaine we have an invaluable aid in the induction of transient local anæsthesia, for the purpose, in suitable cases, of making difficult and painful vaginal examination satisfactory and painless; but that the plan of employing cocaine indiscriminately in the great variety of conditions grouped carelessly under the term vaginismus, although perhaps temporarily successful in relieving the symptoms of pain and spasm, and permitting the introduction into the vagina of the examining finger, specula, or the male sexual organ, is productive of no permanent good, and too often indirectly induces an aggravation of the very disease which it is sought to relieve.

The following abstracts of cases exhibit examples of the employment of cocaine in reflex cramp of the muscles of the pelvic floor. The word "cure" may often be freely translated "temporary relief."

Svot ("Chronic Vaginismus treated by a five per cent. Solution of Muriate of Cocaine and Vaseline," *Russ. Med.*, St. Petersburg, 1885, i., 460–462). Dyspareunia. Mind filled with terror at every thought of connection. Treated without benefit for ten years. Extreme sensitiveness of vaginal walls. Application of cocaine and vaseline. Successful and painless coitus. Pregnancy three months later. Svot thinks patients should be encouraged to think they will get well; this is an important element in treatment.

Dujardin-Beaumetz ("Sur un cas de vaginisme traité avec succès par le chlorhydrate de cocaine," *Bull. gén. de thérap.*, etc., Paris, 1884, cvii., 489). Patient not nervous or hysterical. Intercourse first became painful, and then impossible, after birth of first child, and so continued for two years. Labor difficult; no forceps, no perineal rupture. Vaginal examination painful, difficult; chloroform, forced dilatation of orifice of vagina; no relief. Gradual dilatation with speculum; no relief. Painted internal face of lesser lips and whole circumference of vaginal orifice with a two per cent. solution of cocaine. Disappearance of local sensitiveness in one minute. Painless introduction of speculum. Application repeated four times. Cure. Has obtained equally successful results in other cases not enumerated.

Fränkel (loc. cit.). Young woman, married six weeks. Mucous membrane of introitus hyperæmic, swollen, injured in several places. Great sensitiveness and reflex cramp on attempting to introduce examining finger. Painted thrice, at two-minute intervals, with a twenty per cent. solution of cocaine. Repeated easy and painless introduction of finger.

Butaud ("Des applications thérap. de la cocaïne en gynécologie," *Rev. méd-chir. cl. mal. d. Femmes*, Paris, 1885, vii., 201–220; see, also, reprint from above, Clermont, 1885. Daix, 8vo). Patient with vulvo-vaginitis. Violent pain on introduction of finger; cannot introduce speculum. At least touch, spasm of sphincter vaginæ and transverse perineal muscles. Sexual intercourse long impossible. Pain on sitting down suddenly or riding. Application of a ten per cent. solution of cocaine for five to six minutes to hyperæsthetic region. In two minutes partial, and in five minutes complete, absence of pain or spasm on introduction of examining finger or speculum. Sensibility returned in ten minutes. Application repeated on six following days. Less violent contraction of vulvar ring on irritation of zone of hyperæsthesia. "Mais la cocaine n'ayant qu'une action temporaire sur le vaginisme." In this case there was "ulceration of the neck."

The same. Young woman; very nervous and susceptible; married two years. Never had been able to have sexual intercourse. Vaginal examination impossible. Application of a ten per cent. solution of cocaine for three minutes in hymeneo-vulvar furrow. Examination easy, introduction of speculum painless, nervousness diminished. Dilatation. After twenty-six applications intercourse possible. In this case there was spasm of transverse perineal muscle.

The same. Patient married four years. Sexual intercourse very painful, but not impossible. A ten per cent. solution of cocaine applied. Temporary relief only. Reapplication; excision of irritable carunculæ myrtiformes, seat of pain. Sensibility of parts returned in a quarter of an hour. Cure complete. In this case there was spasm of transverse perineal and constrictor vaginal muscles.

Thomas, C. H. ("Some Uses of Cocaine in Gynecology," *Med. News*, Philadelphia, 1885, lxvii., 567; also, *Maryland M. J.*, Baltimore, 1885–86, xiv., 80–82, Case of "Hyperæsthesia of Vagina with Mild Vaginismus"). One-grain cocaine suppository put in vagina half an hour before each treatment. Abolished spasm. Introduction of speculum easy and painless. Thomas used cocaine successfully in a case of vaginismus in which an examination was impossible.

Schrank ("Vaginismus and its Treatment with Cocaine," *Wien. Med. Wochensch.*, 1885, xxxv., 1140–1143, 1181–1184; also, transl. in *Louisville Med. News*, 1885, xx., 321–337). Patient believes vaginismus is due to irritation of a local lesion, which consists in a rupture of the hymen extending into vaginal tissue, produced at first by coitus and aggravated by contact. Pain and spasmodic phenomena. Recommends the use of a stronger solution of cocaine. With a four per cent. solution anæsthesia often delayed twenty minutes; requires frequent pencillings. After cocainization of the parts, gradual dilatation with Weiss' anal speculum; no pain. Cure complete, when the vagina is so large that no abrasion of the seat of hymeneo-vaginal laceration occurs on coitus. In two cases observed, immediately after period, more frequent application or stronger solutions were necessary to get anæsthesia of introitus.

Casin ("Vaginisme datant de six ans, disparation du Spasme Vulvaire, rapprochements faciles par les Cacligeonnages et l'injection intravaginale d'une Solution de Cocaine à deux pour cent," *Bull. et Mém. Soc. de Chir. de Par.*, 1884, N. S., x., 949). Patient a young woman, married six years. Sexual intercourse has always been impossible. Least touch on external genitals causes violent pain—even convulsions. A slight erosion at the

fourchette the cause of trouble. Advised forced dilatation under chloroform; not permitted. Later, patient advised to apply a two per cent. solution of cocaine to external genitals, and also to inject the same into the vagina through a catheter. Tried four days after period. Attempt at intercourse, five minutes later, absolutely without pain. Cocainization repeated before each coitus. Result only temporary. Pregnancy. Cazin believes that spasm and hyperæsthesia disappear after first labor.

Droiahl ("Behandlung des Vaginismus," *Centralbl. für Gynäk.*, Leipzig, 1886, x., 96; also, *Journ. d'Accouch.*, 1885, No. 10). Patient with vaginismus, treated with vaginal injections and applications to external genitals of solutions of chloral and borax (borax, 15.0; hydrate of chloral, 3.0, and distilled water, 250.0). "Bromhydrate, 0.006, and camphor bromat., 0.06," three times daily by the mouth, with iron. After eight days painless cohabitation. Early conception.

Droiahl quotes from the *Moniteur thérapeutique*" the history of a case of vaginismus. Pencilling of the external genitalia and vaginal injections of two per cent. cocaine solution made painless coitus possible in a few minutes.

Willmott ("Cocaine in Vaginismus," *Austral. Med. Jour.*, 1885, No. 10; also, *Centralbl. für Gynäk.*, Leipzig, 1886, x., 318). Young woman, married ten weeks. Coitus could not be accomplished, each attempt produced severest pain. Forced dilatation of constrictor; removal of hymen; improvement. Three fingers introduced into vagina without pain. After four weeks the original sufferings returned. Pencilling with four per cent. solution of cocaine half an hour before coitus made it painless. General condition of patient improved. She conceived soon after.

Von Ramdohr (*New York Med. Jour.*, 1884, xl., 588). Von Ramdohr succeeded in making an examination in a case of vaginismus, which had resisted every previous attempt, by brushing the mucous membrane with solution of cocaine.

Hoffmann ("Ueber die Anwendung des Cocains in der frauenärztlichen Praxis," etc., *Wien. Med. Presse*, 1884, xxv., 1594–1596, u. 1623–1627). Case 1: Patient young, handsome, and intelligent; general health good; muscles affected by reflex cramp—sphincter vaginæ, anal muscle, muscles of thigh, especially adductors, and the muscles of the abdomen. Contraction as if by faradic current, a veritable "muskelspiel." Introitus vaginæ inflamed and covered with muco-purulent discharge; this area, even if gently touched with cotton, is the seat of pain and origin of reflex cramp. Intense redness, blanched, and examination made possible and painless by the introduction into the vaginal inlet and vagina of suppositories of thirty-five milligrammes of cocaine. Piece of charpie soaked in a three per cent. solution of cocaine laid in the vagina and changed every two to three hours. Before each subsequent examination cocaine suppositories put in rectum. Marriage possible within one month.

Case 2: Patient married twenty months. Fourteen days after wedding husband complained that intercourse had been impossible. Thin muco-purulent discharge from vagina and meatus (husband had contracted gonorrhœa one year before), hymen ruptured, carunculæ swollen, whole introitus inflamed. Severe pain on slightest touch; examination impossible. At end of one month's treatment could not introduce index-finger into vagina. Patient went to another physician. Returned to Hoffmann no better—local condition same as before. Cocaine suppositories, 0.035, per anum, and charpie pledget soaked in a three per cent. solution of cocaine laid in vaginal inlet. Vagina irrigated with astringent and disinfectant solutions, painted vaginal mucous membrane with a solution of cocaine, and introduced a cotton tampon soaked in solution of cocaine. Repeated next day. Coitus without pain or obstacle; first since marriage, twenty months before. Vagina cocainized three times in ten days.

The author. Patient a young girl, nervous, thin, anæmic, married two years, came to woman's clinic, Central Dispensary, for treatment.

History: Intercourse always difficult and painful; more since birth of only child, one year ago. At each attempt agonizing pain at vulva, and spasm of sphincter vaginæ. Impossible to introduce pipe of syringe, on account of pain and spasm. Intercourse entirely discontinued. Pain on walking and sitting.

Examination: On attempt to separate labia violent reflex cramp. Impossible to introduce examining finger. Pencilling of cleansed and dried accessible parts of introitus with a twenty per cent. solution of cocaine. Interval of five minutes. Attempt to introduce finger failed. Renewed application of cocaine; interval six minutes. Thoroughly successful digital exploration of vagina made without spasm and with but little pain. Pledgets of cotton, soaked in cocaine solution introduced into vagina and allowed to remain throughout examination.

Vagina malposed, lumen narrowed one-half by pubic arch crossing it midway;[1] uterus enlarged and retroverted; cervix lacerated. Attempt at introduction of speculum failed. In mid-line at post-commissure an elliptical, deep, angry-looking fissure, and a few areas of superficial erosion. Touch, though slightly painful, borne everywhere but here. Spasm reproduced, though not so violently as before, on touching fissure with camel's-hair brush. Primary cause of cramp, narrowing of vagina; immediate cause, fissure produced by attempts at intercourse, and aggravated by subsequent attempts, and by difficult and instrumental labor.

Subsequent history of case: In spite of prolonged and industrious use of cocaine, fissure showed no signs of healing, nor spasm and pain of ceasing until local rest and appropriate surgical treatment directed to the fissure had been instituted.

In this instance the temporary effect of cocaine was excellent, but total failure to secure any permanent relief after a fair trial of drug alone.

The chief interest in regard to the employment of cocaine in gynecology concerns its use in operative work. The question whether operations about the vagina and cervix are possible, without general ether or chloroform narcosis, has been settled in the affirmative. A considerable number of these operations have been done successfully without any anæsthesia at all, either general or local, but this practice, except in rare and unusual cases, is inadmissible. We have, therefore, at hand two anæsthetics, a general and a local, ether and cocaine, and we are often called upon to decide between them.

It is true, at the outset, that the employment of ether is rarely accompanied or followed by serious results; but in the search for the causes of mortality in operations, even of an apparently trivial nature, ether must always be considered as a possible, though not a probable cause; and when it can be done, all such possible causes of increased death-rate should be eliminated. But further than this, the amount of constitutional disturbance, even if it be but simple annoyance, often induced by ether, when most judiciously administered, and after careful preparation of the patient for narcosis, is entirely out of proportion to the gravity or duration of the operation. Indeed, for a few moments, complete loss of sensibility and of muscular rigidity, a patient is often subjected to hours of subsequent suffering and prostration.

It should be remembered by those most accustomed to giving ether indiscriminately in general, private, or hospital practice, that the gynecologist is called upon to

[1] This condition was described by Hildebrandt, loc. cit. The history of a case in which the vagina was similarly narrowed, was recently narrated at a meeting of the Washington Obstetrical and Gynecological Society, by Dr. George Byrd Harrison. The author of this paper, at the same meeting, mentioned a further instance of the deformity, in which the vestibule was excoriated and contused from contact of the male organ.

treat a class of cases—women, sensitive, bloodless, broken-down with suffering—who, however well they may yield to the influence of the anæsthetic, suffer markedly from its effects, and recall the incident with horror. In the eyes of a busy surgeon the etherization of a patient is not an affair of any great moment and is soon forgotten. But in the eyes of the patient the whole thing is different; it is an event in her life; it is dreaded as much in anticipation as the operation for which it is the preliminary, and frequently causes more after-suffering. It is a thing to be avoided. The very thought of it frightens patients into declining necessary surgical interference, which would be willingly sought if etherization was unnecessary.

It may be said, we believe, that cocaine is preferable to ether in a large number of gynecological operations. Its use is equally to be recommended in securing the briefest possible local anæsthesia, or in maintaining areas of tissue in a state of complete insensibility during the course of the most protracted operation, and it is especially indicated when the condition of the heart or kidney negatives decidedly the employment of ether or chloroform. By a series of the most remarkable operations, Emmet has been able to construct a urethra again and again, when apparently no tissue was to be found anywhere for this purpose. It has been necessary to give ether for each operation of this and of a similar kind, but cocaine would probably answer the purpose just as well, and all danger from the too frequent use of ether would thus be obviated.

When properly used, cocaine procures what is wished—local insensitiveness of tissue—and nothing more, and there is no drug whose external application is freer from difficulty or danger.[1]

There is no area in the body in which, after operative interference, union by first intention is more desirable than the female genital tract. In many operations union by granulation and cicatrization is synonymous with failure, and cicatrices exhibit in women the most extraordinary propensity—not so extraordinary as some would have us believe, however—to become the sources of reflex irritation and of pain. Everything should be done by properly cutting, cleansing, and approximating the wound edges to obtain rapid and permanent healing. But after-rest for a part is no less necessary than cleanliness and proper coaptation. Absolute rest, or any thing approaching it, is impossible in the case of the uterus, vagina, bladder, urethra, or rectum. In respiration the tissues comprising the pelvic diaphragm, and those adjacent to, and in relation with it, move as do the thoracico-abdominal septum and the contents of these two cavities. But these movements are slow and gentle, nor are advance and regression great; the tissues are never stretched. This cannot be said when the pelvic diaphragm is violently agitated by efforts at emesis following etherization. Anyone who has watched the rapid and forced movements of the anterior vaginal wall, for example, when the perineum of a vomiting patient is retracted by a Sims speculum, may be justly fearful of the success of an operation on tissues so stretched and tumultuously agitated. And it is in those operations, where absolute union of freshened edges is requisite, as in the relief of vesico-vaginal fistula, and where, to secure this union, rest, as near complete as possible, is necessary during the first twenty-four or forty-eight hours after the operation, that the employment of cocaine is most singularly applicable. That some patients do not vomit under or after ether, does not invalidate the truth of the foregoing statements, nor does the fact that many surgeons secure the most happy results under the most adverse circumstances. The efforts made in administering ether by the rectum, to do away with the effects of its inhalation in the usual manner, were successful in so far as the "gagging" and vomiting were concerned. But aside from the great dangers of rectal etherization, such a plan is unsuitable in operations on the female genitalia, except in securing primary, or as a preliminary to complete anæsthesia, when the vapor is to be subsequently inhaled.

The range of the usefulness of cocaine is, however, restricted. It can at best procure but a limited anæsthesia. It is essentially non-diffusible; chilling the sensibility only of the surfaces with which it comes in immediate contact, or the tissues in nearest anatomical relation with them. When an operation has to be performed requiring extensive superficial anæsthesia, this anæsthesia is easily produced. But in deep operations it is a question as to just how valuable cocaine is. By repeated applications of the drug, by deep hypodermatic injections, and by the use of strong solutions, the difficulty may be partly overcome. But in the graver operations which the gynecologist is called upon to perform, no reliance can be placed on cocaine, and the chances are they will ever remain beyond the pale of its usefulness, which, with few exceptions, will be confined to the vagina and portio vaginalis.

For one reason alone its employment in some of the simpler and nearly all the graver operations will be inapplicable, and the use of ether will continue to be preferred. However great a degree of anæsthesia of the tissues to be operated upon is induced, the patient will be constantly aware that something is being done, and there will be a tendency on her part, involuntary perhaps, to shrink away from the edge of the table and the reach of the operator. This will require readjustment of the speculum, if one is being used, and the operation will be constantly delayed while the patient is placed in a more satisfactory posture. But more important still, cocaine does not procure that complete absence of all muscular rigidity as does ether narcosis, which is of advantage in all gynecological operations, and absolutely necessary in some. At the most critical point of an operation, when it is necessary to secure a bleeding vessel, or obtain absolute coaptation of two denuded surfaces, the patient, exhausted by the constrained position in which she lies, begins to move about. In the experience of the author there has been more suffering during and after the operation from the maintenance for a long time of one position, and that not a natural or particularly easy one, than from the direct present or after affects of the operation itself. His patients have become restless, and have complained of tired and aching limbs. A comfortable operating-table can always be provided, but it is not always that an operation requiring no little nicety and precision can be done quickly, except by the most practised. When the patient is of an extremely nervous disposition, these difficulties become exaggerated, and ether is a necessity.

One cause of pain and discomfort—prolonged and forcible traction with the Sims speculum—can be eliminated by painting with cocaine, and rendering insensitive the surfaces by the tissues so drawn and compressed (Polk).

If the effect of cocaine on the healing of wounds, in tissues permeated by it, has not been investigated, it would seem that some data on this subject should be collected from experiments on man or the lower animals. If such investigations have been made, the author regrets that an account of them has not come to his notice. No conclusive dicta can be laid down as to the use of cocaine in gynecology until this has been determined. Cocaine must produce a marked degree of contraction of peripheral vessels, for tissues become blanched under its application, and in the author's own cases and others reported elsewhere, there has certainly been less hemorrhage during operations than is customary. How long this local anæmia lasts, whether long enough to exert any

[1] Whether cocaine, employed as it is in gynecology, invites or fosters "a habit," is problematical. The author has seen symptoms which might be attributed to the constitutional effect of the drug in but one case, a male patient of over six feet in height, and weighing fully two hundred pounds. Eight minims of a four per cent. solution were thrown under the skin of the back in two or three places to prepare the way for the use of Paquelin's cautery. There followed in a very short time a feeling of exhilaration and well-being. It is dizziness, nausea, and depression which usually follow the hypodermatic use of fairly large doses of cocaine. See Hall's Experiments, Knapp, loc. cit.

effect upon rapid union or not, are both questions which he would not attempt to answer. In all the reported cases in which cocaine has been used, the rapidity and success of union has either been stated to have been satisfactory or else has received no comment. In no case in gynecological practice, so far as he has been able to ascertain, has any unfavorable influence on the healing of wounds been noted. In each of his own cases union has been all that could be desired.[1]

This faculty possessed by cocaine of diminishing the calibre of blood-vessels, and hence of the amount of blood in a part, has been taken advantage of in the treatment of inflammations of the vaginal mucous membrane. In the milder kinds of vaginitis it forms alone an available application, and in strong solutions is highly recommended as a preliminary or accompaniment to the use of nitrate of silver, sublimate solutions, etc., in the more severe types of gonorrhœal inflammation.[2]

Cocaine has been employed in solutions of various degrees of concentration in gynecology. Of these the four per cent. seems to represent the lowest effective strength, the ten per cent. the medium, and the twenty per cent. solution the highest that has been employed.[3] The degree of both local and general sensitiveness decides the necessary strength of the solution. As a rule the four per cent. solution acts sufficiently well to produce a decided and somewhat lasting effect when the conditions as regards general and local insensitiveness, superficiality of tissues to be affected, etc., are favorable. When these conditions are unfavorable; when the patient is nervous and susceptible; when the field of operation is hyperæsthetic, extensive, or removed from the surface; when the operation is likely to be a protracted one, the stronger solutions are found to be the most satisfactory. Injections with the hypodermatic syringe into the submucous tissues, or repeated pencilling with weak solutions, are quite effective; but the first is often unnecessary, and the second tedious and unsatisfactory.[4] The tendency among gynecologists, particularly in Germany, is toward the use of strong (twenty per cent.) solutions of the muriate, and unless it is some day shown that the action of the drug in this concentrated form is prejudicial to wound-healing, the use of the more powerful solutions, as being at once simple, rapid, and effective, will become general.[5]

The sensation of stinging, heat, or burning, imparted to tissues by the use of the twenty per cent. solution has never been noticed by the author.[1]

But as there are various lengths of time over which an operation may extend, and as there are various degrees of local and general sensitiveness, no unconditional assertion can be made as to the strength of the cocaine solution to be employed.

The methods of using cocaine in gynecology are given in sufficient detail in the histories of the appended cases. For external application, to render the absorptive capabilities of the part as great as possible, the field of operation must be thoroughly cleansed, preferably with soap and water, and then carefully dried. If carbolic or sublimate solutions are used, it should be before the application of the cocaine, and the parts dried as before. Continuous irrigation of cocainized surfaces during operations is difficult to carry out with success.[2] It is well, after first thoroughly pencilling the part with a solution of the desired strength, to apply a thin layer of absorbent cotton soaked in the same fluid over the surface, and allow it to remain for a certain interval.[3] This is simpler than frequent pencillings. The length of time required for thoroughly anæsthetizing a part depends of course on the strength of the solution, the rapidity of absorption, and other variable factors. Although the effect of the drug is sometimes very rapid, the tendency among operators is rather to wait too short than too long time, especially if it be not taken in minutes.[4] The loss of sensation in some accessible areas can be roughly determined by touching the parts with a pin or pointed instrument, at first gently and then with some force. From the observation of the author, with a twenty per cent. solution, although in a very few moments the parts are well anæsthetized, the maximum effect is reached in about four to six minutes. With a weaker solution a little longer time is required.

In some situations the deep submucous injection of weak solutions answers an excellent purpose, while in positions where tissues are thick and the absorptive power is not good, rubbing the drug, in the form of solution or ointment, well into the previously cleansed and dried surface will insure the requisite degree of anæsthesia.[5] The effects of cocaine last a variable length of time.[6] During an operation it is extremely difficult to repeat its application, but with care and patience the bleeding surfaces may be sufficiently dried to make the action of the drug possible, or submucous injections may be repeated. Where operations are performed involving an extensive surface, by commencing the denudation at the lowest possible point, so that surfaces above may be always dry, and uniting wound edges from below upward, areas to be denuded and united may be cocainized step by step as the operator comes to them. This, however, is not always possible.

It is well known that cocaine acts most effectively in tissues which have been rendered anæmic,[7] but it is difficult to drive the blood out of the parts upon which the gynecologist operates. The author has endeavored to reach this end, but with what success he is unable to state, by the administration of a prolonged and very hot vaginal douche just before applying the drug. By means of a neat little instrument devised by Bache Emmet, of

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[1] Bosworth, see Knapp, loc. cit. Application of a two per cent. solution of cocaine to nasal mucous membrane. In twenty to thirty seconds contraction of venous sinuses under mucous membrane. Entire depletion of part in three minutes); later, anæsthesia; capillaries and blood-vessels affected in like manner. Mode of action—causes by absolute contact contraction of unstriped muscle-fibres. Does not act through nerve-supply. Time required for cocaine to act proportionate to absorptive power of mucous membrane; more rapid in columnar than squamous epithelium; more rapid in children than in adults. Contraction of venous sinuses persists about twelve hours, or over. Dr. Canon Morgan, of this city, stated, in conversation with the author, that from a series of (unpublished) experiments in operations on the throat, he was convinced that cocaine delayed union and increased the risk of subsequent hemorrhage. Howe: New York Medical Journal, August 8, 1885. Series of experiments on healing of same lesions of both eyes in the same animal, cocaine being used in but one. Conclusions: Imperfect solutions do not appear to hinder the healing process in lesions of iris, conjunctiva, or cornea. As strong solutions possess strong antiseptic properties they would seem to exert a favorable effect in this respect. The above quoted by Corning, loc. cit., who says: "What influence cocaine has on the healing of wounds is a question that can be answered inductively, and that the above observations go far toward furnishing a definite conclusion. In each of the author's cases of trachelorrhaphy, extensive oozing after operation, coming on after an interval of twelve to twenty-four hours. In each case the period came on prematurely, which is, however, not unusual, and was excessive."

[2] Fränkel, Butaud, Thomas, loc. cit.

[3] Fränkel in his early experiments, which were made on very nervous and sensitive women, tried two to five per cent. solutions of cocaine without decided results. A piece of cotton soaked in a two to five per cent. solution was laid in the vagina and allowed to remain five, ten, or fifteen minutes, with only a slight subsequent reduction of sensibility. He next used a ten per cent. solution, but has finally come to rely upon a twenty per cent. solution almost exclusively. He recommends the following formula: ℞. Cocain. muriat.. 1.0; aq. destil., 3.0; spir. vin. rect., 2.0. To keep up effectiveness of solution a few drops of alcohol must be added from time to time. [Aqueous solutions of the muriate are, the author believes, generally used in this country.]

[4] Schramm (Cocain als lokales Anästheticum bei Prolaps Operationen, Centralbl. fflr Gynäkol., Leipzig, 1885, ix. 225–227) says his next experiments will be to ascertain if cocaine cannot be rendered more effective by applying it externally, or in subcutaneous or submucous injections in combination with morphia and other narcotics.

[5] Butaud, quoting Koenigstens, says, that in ophthalmic operations the anæsthetic power of cocaine increases from two per cent. to ten per cent., and diminishes beyond this degree of concentration. He believes that in gynecology the ten per cent. solution is sufficiently strong for the usual run of cases, and that the twenty per cent. solution should be reserved for use in active inflammations, as vulvitis and gonorrhœal vaginitis. [It is possible that in gynecology there may be some highest efficient strength of cocaine solutions yet undetermined, and that above this point solutions will increase instead of subduing tissue sensitiveness. A great deal of the variability in the action of different solutions of the same nominal strength is said to be due to some kind of deterioration. Boracic acid gr. ij. to cocaine solution 3j. will insure sterility and prevent one kind of deterioration. For some time the author supposed that aqueous solutions of the muriate of cocaine lost their strength with age, and had fresh preparations made before each attempt at cocainization. Of late he has used with perfect success solutions that have been made for months, and have remained in bottles carelessly corked since they were prepared. He does not know what has been the experience of others in this regard.]

[1] Schramm: loc. cit. Fränkel: loc. cit. [2] Schramm, loc. cit.

[3] Engelman: Weekly Medical Review, Chicago, 1885, xi., Suppl., 10, 17, 25. Engelman more than any one else insists on the desirability of this method of practice.

[4] Butaud, loc. cit. In some subjects fifteen minutes are required for complete absorption. Thomas, loc. cit., says, never wait less than two minutes.

[5] Butaud, loc. cit., says powders have not been tried in gynecology, but, according to Jelinek, in the throat have not given as good results as application of solutions.

[6] Butaud, loc. cit., says we cannot rely on more than sixteen to twenty minutes of absolute insensibility.

[7] Corning, loc. cit.

New York,[1] the tissues of the urethro-vaginal septum can be made bloodless preparatory to the "button-hole" operation, and the use of the uterine tourniquet might be revived to produce the same effect before trachelorrhaphy.

By surface pencilling with strong solutions it is believed that in nearly all the simpler and more frequent plastic operations about the vagina and cervix a sufficiently deep and prolonged anæsthesia may be produced.

In the removal of silver sutures, especially from the perineum, sometimes a very painful procedure, cocaine has been recommended and is much employed.[2]

After the preceding generalizations it may not be inappropriate to take up in detail the gynecological operations and procedures in which cocaine has been recommended or employed. Strange as it may seem, the published material to draw upon in accomplishing this result is scant, and represents, in the belief of the author, but a very small part.

Of the experiments made, or experience gained in the use of cocaine, an outline of the histories of individual cases is given, often in the words of the reporter, and observations of gentlemen whose names are not unknown in gynecology.

Some procedures are described which, it is thought, are not in accordance with the views of many American gynecologists.

I. The Vulva, Perineum, and Vagina.—1. *Retention of menstrual blood due to atresia of some part of utero-genital canal. Butaud* (*loc. cit.*) advises its use in operations for the above condition. He says that ether is inadvisable in many cases, for vomiting may cause rupture of the sac containing blood.

2. *Laceration of the perineum, true and so called; prolapse of the vaginal walls and of the uterus, cystocele, urethrocele, etc.* For use in operations upon the perineum and anterior and posterior vaginal walls, perineorrhaphy, and anterior and posterior colporrhaphy, cocaine has been suggested and has been tried with success.

Thomas (loc. cit..) says that Levis, of Philadelphia, has used cocaine with success in such plastic operations in the vagina.

Polk, of New York, recommends in perineorrhaphy the injection of four to five minims of a four per cent. solution of cocaine into the sides of the vagina, just within the ostium, and thoroughly rubbing the solution into the field of operation and its neighborhood.

The author can find no notice of the use of cocaine in primary operations on the perineum.

Schramm (loc. cit.). Case 1: Anterior and posterior colporrhaphy. Nervous subject. Prolapse of anterior and posterior vaginal walls; descensus uteri to the scissura vulvæ; no perineal tear. Sublimate douche; parts dried. Field of operation pencilled with a twenty per cent. solution of cocaine until pale and bloodless. Areas to be denuded and united; previously cocainized *seriatim*. In posterior colporrhaphy cocaine was applied five times with silver wire. Duration of entire operation two and a quarter hours. Only very seldom did patient give signs of there being sensation in parts. No rise of temperature. Union by first intention throughout.

Case 2: Anterior colporrhaphy and colpo-perineorrhaphy. Weak and anæmic. Prolapse of anterior and posterior vaginal walls; descensus uteri to lower third of vagina; retroflexion; laceration of perineum. Technique of cocaine application same as above, twenty per cent. Silver wire and buried catgut sutures. Duration of operation, two and a half hours. No pain. Subsequent progress uncomplicated and without fever. First intention.

In the above operation seven grains, or twenty per cent. cocaine solution was used. In part these operations are done by assistants.

Schramm says anterior colporrhaphy can be done without general narcosis, but not posterior colporrhaphy, for it is very painful.

Bataud (loc. cit.). Case 1: Laceration of perineum, involving sphincter ani. A ten per cent. solution of cocaine applied and well rubbed into parts (massage) for six to seven minutes. Each separate area to be denuded and united was thus treated when reached by the operator. Sensibility was diminished, but anæsthesia was not complete, for pain (slight) was felt on introduction of sutures. Anæsthesia persisted for twenty minutes. If flow of blood was diminished, it was to a very slight degree.

Case 2: Laceration of perineum up to sphincter ani; prolapse. Ten per cent. solution of cocaine. Sulphuric acid applied to two surfaces of a gutter, in order to obtain union between them. No pain. Sensation had not returned at end of eighteen minutes.[1]

The author. Anterior colporrhaphy; Emmet's anterior wall operation. Woman's Clinic of Central Dispensary and Emergency Hospital, April 21, 1886. Negro woman; lymphatic disposition. Cystocele, urethrocele, uterine prolapse. Field of operation cleansed, and six injections of a four per cent. solution of cocaine, in all twelve to fifteen minims, thrown under the mucous membrane of the anterior wall. Very slight bleeding and no pain during the operation. One silver suture to secure three points at front and sides of cervix. Elliptical and crescentic denudations united with a continuous catgut suture. Perfect union.

Drs. Harrison, Fry, and W. W. Johnston, members of this Society, were present at the operation, as was Dr. Magruder, a member of the attending staff of the hospital.

3. *Cyst of the vagina. Schramm* (loc. cit.) recommends the use of cocaine in excision of vaginal cysts.

The author. Operation on cyst of anterior vaginal wall. Woman's Clinic of Central Dispensary and Emergency Hospital, June 12, 1886. The patient upon whom this operation was performed presented herself for treatment in April last.

Two vaginal cysts, situated on the anterior wall, were discovered. The fluid was partly withdrawn from them by means of a hypodermatic syringe, was examined, and an outline of the case reported to this Society. The patient at the time declined further operation. She returned on June 10th, having suffered much pain since her last visit. On account of her dense ignorance it was difficult to tell the nature of her sufferings. She was, she said, incapacitated for work. The cysts were found distended with fluid. The vaginal aspect of the larger cyst was cleansed, dried, and pencilled with a four per cent. solution of cocaine. Pledgets of cotton soaked in the same solution were kept in contact with it for six minutes. No douche given. A piece of the wall was then excised, the cavity of the cyst evacuated, and stuffed with iodoform gauze. There was some little pain during this operation, and disturbance after it, but the patient declined to stay in the hospital and went home.

As was feared, the opening showed a tendency to close; therefore, on June 12th nearly all of that portion of the cyst-wall projecting above the vaginal level was removed with a scissors, after the parts had been subjected to the influence of a twenty per cent. solution of cocaine, on pledget of cotton, for six minutes, and the membrane lining the cyst-cavity stitched to vaginal mucous membrane with ten catgut sutures, as recommended, we believe, by Schröder. There was considerable hemorrhage during this slight operation. There was no pain during or after it. Dr. Fernald, a member of this Society, was present.

4. *Vesico vaginal fistulæ. Schramm* (loc. cit.) recommends the use of cocaine in operations for the relief of vesico-vaginal fistulæ.

Doughty uses muriate of cocaine in operative gyneco-

[1] Emmet (B. M.): A Urethral Clamp for Local Arrest of Circulation during the "Button-hole" Operation, Am. Jour. Obst., New York, 1886, xix., 67. See subsequent discussion by Coe, Mundé, and Emmet.

[2] Polk, Knapp, loc. cit.

[1] It is difficult to understand this case, or the object of using sulphuric acid in order to unite a rupture of the perineum.

logy and vesico-vaginal fistula (THE MEDICAL RECORD, New York, 1884, xxvi., 658).

Case of vesico-vaginal fistula. Very small fistula. Knee breast posture. Thorough cleansing of vaginal surface. Two applications (two drops each) of two per cent. solution of cocaine made three minutes apart. Two minutes later fresh application; repeated in five minutes. In three minutes anæsthesia complete. Denudation for period of sixteen minutes, then for first time pain. Solution reapplied. Denudation completed in thirteen minutes, without pain. Patient put in Sims' position to rest. On resuming operation introduced first two sutures; considerable pain. Reapplication of solution. Introduction of remaining four sutures without pain. Very slight bleeding, noticed flow of blood increased as effects of the cocaine wore off. Coagula seemed firmer than usual.

Polk (Knapp, loc. cit.). Case of vesico-vaginal fistula. Small fistula. Four minims of four per cent. solution of cocaine injected on each side of fistula one-half inch away. Mucous membrane of bladder and vagina around fistula freely painted. Operation; no pain or discomfort.

5. *Pruritis vulvæ. Engelmann* (*St. Louis Cour. Med.*, 1885, xiii., 248–254) says cocaine relieves itching of pruritis vulvæ.

Hoffmann (loc. cit.) employed cocaine with marked success in three cases of pruritis vulvæ. It was used in the form of an ointment, with vaseline, in the proportion of 3 to 100, and applied as often as the itching became annoying.

6. Cocaine has been employed very successfully as a preliminary step in the cauterization of the soft chancre.

Polk (Knapp, loc. cit.), four per cent. solution of cocaine.

Thomas (loc. cit.).

Butnam (loc. cit.), observations at the Lourcine, Paris, with five per cent. solution of cocaine.

II. THE UTERUS.—1. *Curetting. Schramm* (loc. cit.): Patient irritable and nervous; objected to chloroform narcosis. Rapid dilatation of cervical canal with Hegar's instruments of hard rubber; uterine cavity washed out with sublimate solution; dried with cotton wrapped on sound. Cotton impregnated with cocaine solution introduced on sound into cavity; allowed to remain five minutes. Thorough and satisfactory curetting and injection of undiluted liq. ferri sesquichlor. No pain; slight discomfort only. Further progress uncomplicated.

Fränkel (loc. cit.). Case: Curetting, slight pain. Fränkel advises above-described plan of treatment, but allows cocaine solution to remain in contact with walls of cavity for fifteen minutes, using pledgets of cotton impregnated with the drug.

Engelmann (*Medical Review*, loc. cit.) narrates interesting instances of the intra-uterine use of cocaine occurring in his own practice.

2. *Dilatation of the cervical canal; section of the cervix; use of actual cautery for removal of commencing epithelioma; curetting canal; ignipuncture; scarification of cervix, etc. Polk* (Knapp, loc. cit.) remarks that sensitiveness of cervix being less marked than that of most of genital tract, it is the more readily influenced by cocaine; that incision and forcible dilatation of the cervix, the use of caustics and of the sharp curette, the use of the actual cautery (in cases of commencing epithelioma), have all been practised satisfactorily and painlessly by the employment of cocaine. He recommends the injection of three to five minims of a four per cent. solution of cocaine into regions that are to be cut, stretched, or scraped.

Engelmann (*Medical Review*, loc. cit.) suggests the use of cocaine before rapid dilatation of the cervical canal, and the use of sponge-tents.

Case: Firm contraction of external os in a cartilaginous cervix. Painless dilatation of os and cervical canal two minutes after application of a four per cent. solution of cocaine on cotton.

Butaud (loc. cit.). Case 1: Very nervous woman. Ignipuncture of cervix. Forty punctures in forty-five minutes; six applications of cocaine; no pain. Sensibility returned in twenty minutes after operation.

Case 2: Very nervous woman. No pain. Ignipuncture, Butaud says, consists in introduction of the heated point of galvano-cautery into tissues of cervix thirty, forty, fifty, or one hundred times, to the depth of fifteen to twenty millimetres. (See, by the same author, "De l'ignipuncture profonde du col de l'uterus," *Rev. Méd.-Clin. des mal. d. Femmes*, Paris, 1886, viii., 10–24.) This procedure is made painless by the application of a ten per cent. solution of cocaine to the neck, and repeated every ten minutes until the end of the operation. Sometimes, in spite of cocaine, the heated points are felt. Advises the use of cocaine before *scarification* of the neck.

Schramm (loc. cit.) recommends cocaine in *Schröder's operation for excision of cervical mucous membrane and in galvano-caustic amputation of portio vaginalis.*

Chéron (*Rev. Méd.-Clin. d. mal. d. Femmes*, Paris, 1884, vi., 664) has employed cocaine in two cases of ignipuncture which were rendered entirely painless by means of four successive applications of a five per cent. solution of cocaine.

Fränkel (loc. cit.). Experiments. Two deep punctures of cervix (according to Spiegelberg) loudly complained of. Surface then twice pencilled with a twenty per cent. solution of cocaine, and for five minutes cotton soaked in a solution of the same strength left in contact with eroded portio. Punctures; no pain.

3. *Trachelorrhaphy; Emmet's operation for laceration of the cervix uteri. Polk* ("Hydrochlorate of Cocaine as a Local Anæsthetic in Gynecology," THE MEDICAL RECORD, New York, 1884, xxvi., 489). Case 1: Double laceration of cervix uteri extending on both sides to cervico-vaginal junction. Parts washed with warm water and soap; dried. Cervix: Its canal and adjacent vaginal wall painted with a four per cent. solution of cocaine three times, at two to three minute intervals; after last, three minutes' wait. Operation elaborate of its kind; cicatricial plug from each angle. Time of operation, forty minutes. No pain or discomfort. In last ten minutes some soreness.

Case 2: Patient has less self-control than above. Preliminaries same as before. Acute pain; after twenty minutes application (fourth) was made. After three minutes' wait the operation was continued, and completed without pain. Polk says cocaine retarded blood-flow in first case.

Roeth ("Cocaine in Trachelorrhaphy," *American Practitioner and News*, Louisville, 1886, N. S., i., 37; see, also, *Boston Medical and Surgical Journal*, 1885, lxii., 527). Case 1: Laceration of cervix to vaginal vault on right side, admitting finger into cavity of uterus. Three hypodermatic injections into cervix, one on each side of rent, and one at base of sulcus. Five minutes' wait. Painted surfaces to be denuded. Shortly after began operation. No pain throughout. Quantity of drug used 3 ss+. Roeth says in future he will use cocaine in preference to ether.

Fisher ("Trachelorrhaphy with Cocaine," *Northwest Lancet*, St. Paul, 1884–5, iv., 440). Case 1: Lateral laceration of cervix extending quite to vaginal junction. Tried general anæsthesia; abandoned on account of bad behavior of the heart. Operation postponed two days. Cervix brushed lightly with a four per cent. solution of cocaine; five minims injected into either lip about four lines from ulcerated surface. About thirty minims used in all. Usual operation: no pain or inconvenience, except from constrained position of patient and traction on the uterus. Union good. Fisher says cocaine is a good substitute for anæsthesia, but it does not secure relaxation of muscular tissues nor permit of uterus being drawn as near the vaginal orifice as is otherwise possible.

The author. Three cases of trachelorrhaphy. Case 1: Patient of lymphatic temperament. Bilateral lacera-

tion of cervix down to vaginal junction; tissues hypertrophied, rolled out, cystic, eroded, cicatricial. Hot carbolized douche; parts dried. Cervix, cervical canal, and vaginal fornix painted once with a twenty per cent. solution of cocaine. Six minutes' wait. Operation (May 27, 1886) very extensive. Hemorrhage very slight; absolutely no pain; silver wire. Time of operation, from first application of cocaine to twisting of last suture (a hot antiseptic douche being given before coaptation of parts), one hour and ten minutes. After operation no rise of temperature, no pain or discomfort. Discharge of blood from vagina began twenty-four hours after operation, and lasted twenty-four hours. Premature menstrual period five days after operation; more profuse than usual; lasted usual time. Sutures removed on fifteenth day, one at left angle on eighteenth day; union perfect. Dr. Fry, who is present this evening, will bear witness to the painlessness of this operation.

Case 2: Patient a very nervous and excitable woman, almost hysterical at beginning of operation. Slight right-sided tear of cervix, and considerable cicatricial deposit at angle. Operation June 12, 1886. Field of operation cleansed, dried, and pencilled as before. After first pencilling, a pledget of cotton, soaked in a twenty per cent. solution of cocaine, left in contact with cervix for six minutes. Time of operation estimated as before, forty-five minutes. When half over, cocaine applied very unsatisfactorily to denuded edges. Hemorrhage inconsiderable, less than what might have been expected; silver wire. Patient restless and fearful during operation, afterward assured author there was no pain attending it.

Drs. Fry, Fernald, and W. W. Johnston assisted the author in this operation.

There was slight oozing of blood from the vagina for twenty-four hours after the operation; no pain, subsequent discomfort, or fever.

Case 3: A very nervous patient. An extensive bilateral tear, up to internal os and outward to vaginal junction. Lips thin; tissues everywhere soft; no effort at nearing a deposit of scar tissue. Considerable erosion. Operated May 29th. Preparation of field of operation as in Cases 1 and 2, twenty per cent. solution of cocaine being used. The internal edges of the already made flaps freshened and brought together; very little hemorrhage; silver wire and two catgut crown sutures. Patient very restless, but suffered no pain during or after operation. Time estimated as before, one hour and ten minutes. No rise of temperature. Considerable oozing began twelve hours after operation; lasted one day. Period came on prematurely and was more profuse than usual. Drs. Fry, Cutts, and Johnston were present at this operation. Sutures removed on eighteenth day. Union perfect.

Of these three cases, operated upon by the author, all were white, one only being a hospital patient. One cause of pain and suffering during and after trachelorrhaphy was avoided by keeping the uterus fixed with tenacula, but exerting no irregular or injudicious traction upon it.

Schramm (loc. cit.) recommends the use of cocaine in Emmet's operation (trachelorrhaphy).

Engelmann (*Medical Review*, loc. cit.) describes a case of trachelorrhaphy done by Mundé, of New York. Solution of cocaine injected into cervix. No pain until introduction of deep sutures. Author has not seen original reference.

Fränkel (loc. cit.) describes a case in which cocaine was used successfully in forcibly breaking up some post-uterine inflammatory adhesions, thus restoring the uterus to its proper position.

III. URETHRA.—1. *Dilatation of urethra. Koppe* ("Cocainum Hydrochloricum als Anästheticum bei der Smian'schen Dilatation der weiblichen Urethra," *Centralblatt für Gynäkologie*, Leipzig, 1885, ix., 695). Patient very anæmic, nervous, and susceptible. Diagnosis made of tumor in the bladder; to complete diagnosis dilatation of urethra was desired; chloroform contra-indicated by condition of heart, etc.; bladder emptied by catheter; cotton wrapped on sound and soaked in twenty per cent. solution of cocaine put in urethra, and application of same strength of solution to vaginal wall and about meatus; four such applications of cocaine solution in twenty minutes; mucous membrane pale; meatus enlarged with scissors; Hegar's dilators. After introduction of No. 18, index finger was introduced, both having circumferences of 6 ctm. Diagnosis completed. No pain on cutting or dilating. Slight discomfort from stretching on introduction of finger far into bladder. Whether cocaine would be effectual in the removal of such a tumor yet remains for demonstration.

2. *Galvano-caustic division of the urethro-vaginal wall. Butaud* (loc. cit.) gives a case of a very susceptible patient. Chloroform contra-indicated on account of condition of kidneys and arteries. Calculus of urethra. Solution of 0.50 ctgm. cocaine to 5 gm. water used. Anterior vaginal wall, meatus, introitus, etc., pencilled repeatedly and same solution thrown into pocket containing calculus. Section of septum by heated platinum wire; lasted four to five minutes. No pain. No loss of blood.

3. *Excision, torsion, or cauterization of urethral caruncles; vegetations of meatus, polypi of meatus urinarius, prolapse of urethral mucous membrane, etc. Godson* (*British Medical Record*, January, 1885) quoted by Butaud, see original.

Butaud gives vascular vegetation of meatus urinarius, twenty per cent. solution of cocaine, twice pencilled on vegetations and surrounding parts. Excision, scissors: no pain; weaker solution of iodide probably answer.

Butaud (loc. cit.). Case 1: Pediculated vegetations of inferior lip of meatus; five per cent. solution of cocaine; cautery; no pain.

Case 2: Polypus of urethra, size of filbert, hung from meatus; ten per cent. solution of cocaine; torsion; thermo-cautery to seat of implantation; no pain. Sensation had returned in ten minutes.

Case 3: Two small urethral polypi hung from meatus, very painful; ten per cent. solution of cocaine. Anæsthesia in four minutes; excision, scissors; galvano-cautery, no pain. Sensation had completely returned in fifteen minutes. Under cocaine polypi blanched.

Fränkel (loc. cit.) recommends employment of cocaine in the treatment of superficially seated growth of vulva, condylomata, etc., and in caruncles of urethra.

Polk (Knapp, loc. cit.) recommends cocaine in removal of urethral caruncles; four per cent. solution of cocaine, med. cautery.

Emmet's "button-hole" operation.

Thomas (loc. cit.), painful and irritating inflammation of female urethra.

From the preceding enumeration of a few of the almost infinite number of conditions in which cocaine has been used as a local anæsthetic in gynecology, and with the thought before us that in obstetrics,[1] ophthalmology, laryngology, and general surgery the results of its application have been no less gratifying, it will be seen how great is the measure of its usefulness.

HUNGRY POLES.—Some Poles in Toledo came near creating a riot because the meat-inspector attempted to prevent them from eating the meat from a cow which had died of splenic fever.

[1] It may be interesting to refer to the following articles: Knapp (loc. cit.) quotes experiments of Le Fevre, an interne at Bellevue, with cocaine in the first stage of labor; Weiss (loc. cit.), Cocain gegen unstillbares Erbrechen der Schwangeren: Doleris, De l'anargésie des voies génitales obtenue par l'application locale de la cocaine, pendant le travail de l'accouchement, Arch. de Tocol., Paris, 1885, xii., 165-169; also, Compt. Rend. Soc. de Biol., Paris, 1885, 8, S., ii., 37-40; Fränkel (loc. cit.), On Cocaine in First Stage of Labor; Uhler, Muriate of Cocaine in Labor, Maryland M. J., Baltimore, 1884-85, xii., 20; Cocaine in Completion of Second Stage of Labor; Hergott (loc. cit.), De l'emploi de la cocaine en obstétrique. Hergott reports instances of usefulness of cocaine in fissured and painful nipples; Thomas (loc. cit.) refers to employment of cocaine in vomiting of pregnancy, and first and second stages of labor; Engelmann, Med. Rev. (loc. cit.), gives instance of success of application of four per cent. solution cocaine to eroded cervix in vomiting of pregnancy; Cincinnati Lancet and Clinic, etc., 1884, xiii., 552, The Use of Cocaine in Painful Catheterization after Labor; also the last number of the Nouvelles Arch. de Gynécologie.

A CONTRIBUTION TO THE SYMPTOMS AND PATHOLOGY OF ENDARTERITIS OBLITERANS.[1]

By GEORGE L. PEABODY, M.D.,

PHYSICIAN AND PATHOLOGIST TO THE NEW YORK HOSPITAL.

My communication this evening concerns the details of a few cases that have recently been under my care, most of them with fatal termination, and followed by autopsies which rendered the lesions sufficiently plain. They are offered to the Society not as something new, but as bearing with some distinctness upon a chapter in special pathology upon which comparatively little work has been done—at least here. It is interesting that death may result from this lesion, with striking clinical evidences of destruction of motor areas in the brain, which autopsy reveals to be intact. The only explanation which suggests itself is that, in addition to the partial obliteration of the lumen of the nutrient artery of the area affected, there must have been a spasmodic contraction of the vessel or vessels which was sufficient to cause complete local arrest of the circulation. The duration of this spasmodic contraction varies. In some attacks it lasts only a few minutes, and then all the symptoms pass away as rapidly as they come. In others the duration is prolonged to such an extent that life comes to an end before it ceases; and yet the duration may not be sufficiently prolonged to cause softening of the brain-area affected.

Another possible termination is hemorrhage, as is seen in one of my cases.

This lesion is common enough in nearly all the organs of the body. I have frequently seen it in the lungs, kidneys, heart, and in neoplasms, especially in epitheliomata. It has been, however, in my experience, commoner in the brain than in any other organ. It needs not to be said that it does not always produce symptoms.

It was, at one time, supposed to be invariably due to syphilis, but that idea is now no longer held, although it is more common in syphilitics than in others.

The earlier writers on this subject—Steinburg, Heubner, Wilks, and others of more recent date—maintain its dependence upon syphilitic infection; but it has occurred in so many patients in whom no other evidence of that disease could be found, either clinically or anatomically, that it seems to me fair to admit that this cannot always be the case.

One of the first cases that came under my observation, some years ago, occurred in the person of a prominent surgeon of this city, who realized the necessity of giving a complete history of his life to his physician, and who had had a large family of healthy children. He certainly did not know that he was syphilitic. Other cases of this kind have come under my observation.

Hilton Fagge believed it to be always a lesion of syphilis.

The most recent writer on this subject of whom I have any knowledge is a Frenchman named Hippolyte Martin, who has an elaborate article in the *Revue de Médecine* for January of this year. He is quoted in the *Centralblatt f. kl. Medicin* for May 15, 1886.

In a very elaborate article he endeavors to prove that a large number of organic diseases are due to this arterial disease. He considers that it occurs earliest in the *vasa vasorum* of the ascending aorta, and regards alcohol, lead, and uric acid as efficient causes of the lesion. A great many cases are not susceptible of explanation, such as those which relate to young children of three or four years of age, who are affected neither by tuberculosis nor syphilis. He regards micro-organisms as an occasional cause. Certain trophic disturbances of the nervous system are also vaguely alluded to in reference to etiology. This disease in the aortic nutrient vessels may give rise to atheroma of the aorta. He ascribes the origin of many cases of hitherto unexplained mitral disease to this lesion in the arteries of the valve, as well as also degeneration of the heart-muscle and new-growths in it. Atrophic changes in the kidneys are thus produced. Similar changes occur in the spinal cord, and sclerosis of the posterior columns is instanced as one of the commonest of them.

Atheroma of the cerebral arteries is traced to progressive obliterating arteritis as a cause. We know but little of the consequences of this disease in the lungs, liver, spleen, alimentary canal, and skin, but cirrhotic changes in most of these organs are probably thus produced.

This paper by Martin is long, clearly written, and very suggestive.

The following cases have occurred to me during the past few months:

Case I.—J. M——, aged fifty-six, a native of Ireland; widower; a tailor by occupation; was admitted to my service in the New York Hospital April 22, 1886. He gave the following history: His mother was rheumatic; his father he knew but little. He said that he (the patient) had had rheumatism in his hips for six years. He denied malarial history. He had a soft chancre years ago, and suppurating bubo, but he denied symptoms of syphilis. He has partaken immoderately of spirits for the past twelve years. During the entire past winter he has suffered from a continuous headache, and from ringing in the ears. He has not been dizzy. About ten days ago he suddenly fell to the floor, and was unable to move either of his right extremities, and was unable to talk; he did not lose consciousness. In half an hour he was able to talk, and power had returned in great measure to his leg, but less to his arm. Four or five times since then he has had slighter attacks of a similar character, when he could not speak or move, but recovered always in a few minutes. There was never any loss of consciousness. He never had an attack previously to ten days ago. His appetite is fair, his bowels regular. His temperature is 100.6°, respiration 24, and pulse 82, on his admission to the hospital at 11 A.M. He is senile; his superficial arteries are stiffened and tortuous. He is poorly nourished; there is no œdema. There is incomplete right facial paralysis. The tongue on being protruded deviates to the right. There is well-marked right hemiparesis; there is no disturbance of sensation; there is lateral curvature of the spine; the chest is barrel-shaped; the heart-sounds are normal.

His urine gives the following results on examination: Reddish-yellow, acid, 1.024, no albumen, negative microscopically.

Treatment.—Potass. iodid., gr. xx., every three hours.

April 23d, at 3 A.M.—He had a seizure at this time characterized by loud, gasping, stertorous breathing, and complete inability to speak or protrude his tongue. His pupils were normal. He could move both arms and legs, but there was marked diminution in the power of both of his right extremities. Consciousness was complete. In about half an hour he recovered from this attack, was able to speak perfectly, and told accurately all that had happened. He could protrude his tongue readily. It deviated somewhat to the right. His temperature and pulse were normal; his respiration somewhat accelerated. The iodide of potassium was increased to gr. xxx. at a dose. He felt well, and was allowed solid food at his own request. In the absence of the attendant he tried to get into bed from the night-stool this morning, but fell and was unable to get up without assistance. At 5.30 P.M. he had an attack similar to the previous one. It lasted forty minutes. Recovery from it was slower and less complete. He could soon protrude his tongue, but with difficulty. He could talk so as to be understood, but talking was an effort, and his speech was indistinct.

April 24th.—During the early part of the night he again got out of bed and fell, and was quite restless. He said that after both attacks his head ached very severely, and he was unable to eat. Very early this morning he had a similar attack, but much more severe than any of the previous ones. At 4.30 A.M. he was still suffering from

[1] Read at a meeting of the Practitioners' Society, on June 4, 1886.

it, was conscious, but now was entirely unable to move the right side.

At 9 A.M. he was unconscious, in a profuse perspiration, and breathing with marked stertor. His temperature was 104° F., respirations 52, pulse 129. He continued in this state, rapidly growing weaker, till 1.45 P.M., when he died. The temperature after death was 105.8° F.

The autopsy was made about an hour after death. The weather was warm, and therefore, to prevent the occurrence of post-mortem changes the body was taken directly from the ward to the autopsy-room. It was fairly nourished. Rigor mortis was absent. There was no œdema. The organs generally were normal. The cortices of the kidneys were a trifle thin, but the surfaces were smooth, and the markings distinct. There was slight hypertrophy of the left cardiac ventricle.

There was a mass of grayish-yellow material in the liver, measuring two by three centimetres. It contained caseous material, and proved on examination to be surrounded by a layer of connective tissue, and to be an old gumma.

With the exception of the brain, now to be described, the other organs were substantially normal.

The arteries in the circle of Willis showed several small, insignificant patches of atheroma. In most of them, notably the basilar and left middle cerebral, there was a well-marked growth of connective tissue from the wall of the intima. The calibre of the vessels was thus distinctly encroached upon, but by no means completely obliterated. In many of these regions was found the small-celled growth of periarteritis as well.

There was no alteration in the color or consistency of any part of the brain, and no other change was found.

A microscopic examination of the affected arteries showed the lesion to be a chronic endarteritis, *i.e.*, a connective-tissue growth from the intima, which involved to a varying degree almost the entire circumference of the vessel. The lumen was thus not obliterated, but very materially encroached upon.

I have the pleasure of showing you here the arteries in question, and also several microscopic sections of the left middle cerebral and basilar arteries. They are so very demonstrative as to need no detailed description.

CASE II.—R. O. H——, aged thirty-six, a stenographer, seen on January 26, 1886, with Drs. Franz Foerster and Schlegel, of this city. For several weeks prior to his illness he had complained of vague and indefinite pains in the occipital region, and of sharp lancinating pains on the right side of the head. He had been treated with quinine and phosphoric acid, with partial relief. On January 25th he worked steadily at his calling all day, ate a heavy supper at 7 P.M., and continued his work until 11 P.M., when he went to bed. At one o'clock next morning his wife was aroused by loud stertorous breathing, and found him sleeping so heavily that she became alarmed. After much effort she succeeded in arousing him, but not to a condition of consciousness. He was wildly delirious, raving like a madman, and endeavoring to force his way through the wall into the next house. His wife succeeded in persuading him to return to bed, and in a few moments he became profoundly comatose. From this condition of coma he was never again aroused. The doctor was summoned and found the temperature not elevated, pulse scarcely perceptible, respiration very shallow, pupils unevenly dilated. Under treatment his pulse improved, and his temperature rose to 100°. I saw him before noon on this day. He could not be roused, but when loudly spoken to and shaken his face would become distorted as if he were in pain, and he would bring his right hand to his head and groan. His pupils were normal and reacted well, and his pulse was 80 and feeble. He continued in this state all of that day and the next. His urine was suppressed for twenty-four hours, and then became fairly abundant and of normal characteristics.

During much of this time there was marked cutaneous hyperæsthesia, and there was never any paralysis. His pulse was never full and slow; his temperature rose to 101° shortly before death. On January 27th he grew steadily weaker, his coma became more profound, and he died at 10 P.M., forty-five hours after the commencement of the attack, respiration having ceased before the heart ceased to beat. Dr. Foerster tells me that the patient always considered himself syphilitic; but that he (the doctor) never satisfied himself that he was so. He was of very temperate habits.

The autopsy was made twelve hours and a half after death. Examination of the head only was allowed.

The pia was found intensely congested. Beginning at the optic commissure, and extending thence backward over the base of the brain, there was a thin layer of blood on the surface of the pia and in its meshes. Its point of greatest thickness was over the pons, where it measured 3 mm. It completely surrounded the basilar artery. The wall of the basilar artery was seen to be very thick, owing, as can still be seen, to a growth from the intima. This growth covers only a centimetre in length, and though it markedly diminished the lumen of the vessel it did not entirely obliterate it. There was marked softening with punctate hemorrhages in the right temporo-sphenoid lobe, and in much of the gray matter of both occipital lobes upon the vertex. The vessels at the base were otherwise normal. There was a little bloody serum in both lateral ventricles, and there were small, well-formed clots in the third and fourth ventricles.

The convolutions were not flattened.

The microscopic examination of the basilar artery at the site of the lesion revealed, combined, the evidences of a well-marked periarteritis and endarteritis obliterans. The lesions are both well seen in the sections which I lay before you here upon the microscope. The extensive, small-celled, moderately vascular growth surrounding the vessel exactly at the site of the connective-tissue growth from the intima would clearly account for marked interference with the lumen of the vessel.

This combination of lesions I have before recorded (in the "Transactions of the Pathological Society") in a patient who died after repeated attacks of well-marked cerebral syphilis, which frequently yielded completely to treatment. That patient died, after having persistently neglected treatment, in the fourth attack of cerebral symptoms; and in his case the combination of this periarteritis and endarteritis was situated in one of the fissures of Sylvius, and involved the middle cerebral artery, with the production of secondary softening in the floor of the corresponding lateral ventricle.

CASE III.—M. E——, aged eighty; Ireland; married; was admitted to my wards in the New York Hospital, May 30, 1885. She was brought in by the ambulance, with the history that she had been unconscious a week, having suddenly become so. On admission her temperature was 100.6°; respirations, 20; pulse, 100, at 2.30 P.M. She was in a condition of coma from which she could not be roused. There was complete paralysis of the left arm, incomplete paralysis of the leg of the same side. The extremities of the right side were rigid, and there were automatic movements of the right hand and arm. Reflexes were exaggerated on the right side and delayed on the left. Both pupils were slightly dilated, the right rather more so than the left, and they reacted sluggishly to light. Her tongue was dry and brown, and did not deviate. Her pulse was imperceptible, respiration shallow. Her urine was of low specific gravity, and contained albumen and casts, both hyaline and granular. She was unable to swallow, and an attempt was made to nourish her by enemata, but they were not retained. On May 31st her temperature had risen to 103.4°, and her respirations were 32, her pulse being 152. Her face was flushed, paralysis became more complete, the automatic movements of the right side had ceased,

and the rigidity had become more marked. Toward afternoon her pulse failed, and she grew progressively weaker, and at 4.30 P.M., twenty-six hours after she first came under observation, she died. Her temperature rose before death to 107°.

The autopsy was made twenty hours after death. The muscular tissue of the heart contained a little fat. The kidneys had many small cysts in the cortices, and the cortices were thin. The cortex of the brain showed the condition of senile atrophy usual at her age. The vessels at the base of the brain, and the two middle cerebral arteries, extending well into the fissures of Sylvius, showed the condition of obliterating arteritis. There was no alteration either in the color or consistency of the brain tissue, such as indicates softening.

CASE IV.—John M. B——, aged forty-five, a native of the United States, unmarried, a watchman by occupation, was admitted to my service in the New York Hospital, February 13, 1886. He was brought in by friends, who stated that he had been suddenly attacked that morning with convulsions, which were much more marked on the right side than on the left. At first he had vomited a large quantity of watery fluid. From that time until the time of his admission, at 3.50 P.M., the convulsive movements had been repeated to a slight extent occasionally. His friends also stated that he had suffered from rheumatism, and had complained from time to time of headache, dyspnœa on exertion, and some difficulty with his eyesight. His temperature on admission was 103°. Respiration was 22; pulse was 90. He was poorly nourished. There was no œdema. His superficial arteries were rigid and tortuous. There was rigidity and occasionally convulsive movements of the left extremities. There was slight right facial paralysis. Reflexes were normal, pupils also. He presented a senile appearance generally, and was probably really much older than his friends thought. Arcus senilis was marked. The heart-sounds were feeble, but there were no murmurs. There was complete amnesic aphasia. His urine was normal.

He was given potass. iodid., gr. xx., every three hours. At 9.30 P.M. his temperature had fallen to 100.4°.

The next day his temperature was normal all day. He passed his urine involuntarily during the night, and after the first dose was unable to swallow his medicine or to take any nourishment. During the night his medicine and food were both administered by rectum, but on the day following his admission he was able to swallow with ease. On the next evening his aphasia was gone and he became very noisy and delirious, and was given morphine hypodermatically without much effect.

On February 15th his delirium was again repeated at night. As his bowels had not moved, he was given calomel, and subsequently croton-oil, with the effect of producing one evacuation. His temperature that evening was 101°.

February 16th.—He was very noisy last night, and morphine (gr. ¼) again failed to quiet him when given hypodermatically. He imagined through the night that he was being devoured by rats, and was finally quieted only after four doses of digitalis, chloral, and bromide of potassium had been given at intervals of one hour. His iodide of potassium had been increased to forty grains every three hours.

February 17th.—His temperature varied between 98° and 101.2°. He was quiet most of the day, and was easily quieted to-night with much less medicine than he took last night.

February 18th.—He commenced to recover his memory, his mind became clearer, and he talked rationally. He still had to be catheterized at regular intervals. His urine continued normal.

February 19th.—Last night he passed urine without help. He remained perfectly quiet, and continued to be perfectly rational on most subjects. He was allowed soft diet.

February 20th.—Pulse, temperature, and respiration were normal.

February 21st.—He was allowed to get up and dress, and seemed to feel perfectly well. There was no trace of paralysis, and no return of aphasia.

February 24th.—Iodide of potassium was reduced to gr. xxx. t.i.d. He was now rational on all subjects, and presented no symptoms whatever, except that he was not very quick of apprehension.

February 26th.—He left the hospital apparently well.

Inasmuch as the patient recovered, there is, of course, room for doubt of diagnosis; but the course of his disease seemed *to me* to preclude the possibility of syphilitic pachymeningitis—the only other lesion at all to be considered.

Clinical Department.

GUN-SHOT WOUND OF KNEE-JOINT—RECOVERY.

DR. JOHN RODMAN, of Abilene, Tex., reports the case of a man who was shot horizontally through the knee-joint with a "bull-dog" pistol, the ball ranging outward. A large quantity of synovia was evacuated, and as the joint was entered, the bone was found to be shattered, one spiculum of which was removed at the time the ball was spent by the bone, and was extracted from the fascia on the outer side. The probe grated over a large surface of comminuted bone, and came in contact with pieces of bone that could not, however, be removed through the wound. The latter was irrigated and cleansed with corrosive sublimate solution and hermetically sealed, a posterior splint being applied. The temperature was but 99½° on second day, and was normal on the fourth day and afterward. The dressing was removed fifteen days after the receipt of the injury, and no pus could be found. The joint is now being flexed daily, and the prospects are that no stiffness will result. Dr. Rodman says that in his past experience of knee-joint wounds (from railroad injuries solely), he has never known a recovery, even after amputation, when the joint was opened and the bone comminuted.

CONGENITAL TUMOR OF THE RECTUM.

DR. W. H. HAYNES, of 330 East Fourth Street, referring to a case of supposed congenital external piles, published in THE MEDICAL RECORD of November 22, 1884, writes that he has recently met with a somewhat similar condition. The patient, a female, the second child of a healthy mother, had from the day of its birth a tumor of the rectum.

After each stool there was seen projecting from the anus a globular tumor about the size of a small cherry-stone, dark red in color, suspended by a short pedicle from just above the muco-cutaneous border of the anus. No hemorrhage attended its appearance, and it was painless and semi-solid to the touch. It was seized with a pair of forceps, which caused slight bleeding. A silk ligature was tied around the pedicle at its base, and on the morning of the third day following, the tumor fell off during a stool, and was thrown away. When the child was seen a few days later there was nothing unusual to be noticed about the anus, except a little point of ulceration just within its border. There was no reason to suspect any predisposing influence other than that the mother was afflicted with internal hemorrhoids, but not to any great degree of suffering.

Dr. Haynes writes: "Objections may be raised to the term 'congenital hemorrhoids,' yet it certainly succinctly describes the conditions found in this case and the one before referred to, better than any other that could be

mentioned, although it may seem inconsistent to name a deformity after a disease, though they resemble each other in every respect except as to cause. Again, it may be thought that the last case was one of polypus of the rectum; but as to that I would reply that its location and appearance were certainly not that of the soft gelatinous polypi met with in children, nor of the hard fibrous tumors found in adult life, but it did resemble more than anything else what is termed hemorrhoids or piles. In neither case were the contents of the tumors noted. In the first they were not looked for, and in the other the tumor was lost."

AN ANODYNE FOR USE IN VESICAL IRRITATION.

Dr. W. P. Copeland, of Eufaula, Ala., writes: "In almost every community there are old men who suffer from enlarged prostates, accompanied with a chronic inflammation of the neck of the bladder, rendering them miserable sufferers and a care and anxiety to their friends and families. Having had the professional care of several of this class of cases, and dreading the tendency they so frequently incur by the administration of opium for the relief of pain, I resorted to various washes for injecting the bladder, resulting in my adopting a solution of benzoate of soda, ten grains to one ounce of water, with twenty to thirty drops of the green tincture of gelsemium; this is warmed and injected by the patient through a soft-rubber catheter, whenever the pain is severe, and the catheter withdrawn, leaving the medicine to be voided in twenty or thirty minutes; or where they are not able to pass anything from the bladder, the catheter is reintroduced and the medicine allowed to escape. My experience with this treatment has been so satisfactory that I cannot refrain from giving it publicity to the profession."

SOME OF THE THERAPEUTIC EFFECTS OF CAFFEINE WHEN HYPODERMATICALLY ADMINISTERED.

Dr. John Cochrane, of Lowell, Mass., writes that some two years ago, while seeking a preventive of the depressing effects sometimes noted after the administration of morphine, he became interested in the study of caffeine and its therapeutic value, and determined to test the assertion that caffeine increases the force of the heart and arterial tension. "During these two years," he writes, "I noted my cases, and from these notes select the following cases, because they prove conclusively to me that the above statement is correct:

"Case I.—A professional gentleman, aged forty-three; has suffered constantly during the last thirty years from intermittent fever and chronic rheumatism; he is addicted to the morphia habit, and during the greater part of the last sixteen years has been taking from one-fourth of a grain to twenty-five grains per diem, just as he felt inclined. He has repeatedly tried to give up the drug, and as often failed. During one of these struggles I found him suffering from excessive debility and wretchedness—thirst, anorexia, soreness in back and limbs, headache, eyes dull and pupils small, tongue flabby, dry, tremulous, and like raw beef; heart slow, weak, heaving; pulse, 72, weak, and almost imperceptible; respirations, 14, shallow, and interrupted every few moments by a half-gasp, half-sigh, as if the air escaped too quickly, and accompanied by a feeling of want of breath; temperature, 98.8° F. I dissolved one-half of a grain of caffeine in twenty minims of warm water and injected the solution into his arm. In half an hour the headache, irritability, soreness, dulness of eyes, and wretchedness had disappeared; the respirations were 16, full, deep, and uninterrupted; the heart was strong and steady; pulse, 84, large, strong, and full; temperature, 99.2° F.; the patient expressed his feeling by saying he felt 'like a well man.' These direct effects lasted between three and four hours. In the afternoon the same quantity of caffeine was injected, and followed by the same effects. There were several ill effects—excessive thirst, a craving for a renewal of the medicine, and next morning the sites of the injections showed signs of ulceration.

"Experience has led me to put the utmost confidence in caffeine as a synergist. The following case illustrates the value of the drug in this respect:

"Case II.—A professional gentleman, aged thirty-six, unmarried. Excepting cardiac weakness, caused by a severe and prolonged attack of rheumatic pericarditis sustained six years ago, the patient is in excellent health. But he has a habit of eating according to the mood he is in—sometimes he masticates slowly, and sometimes he 'bolts' his food. This bolting is followed by indigestion and colic. During the twenty months of my attendance he suffered from fifty-six such attacks. At first I administered sometimes morphia alone, at other times dissolved tablets of morphia, atropia, and sodic chlor.; relief from pain followed almost immediately, yet the exhaustion, occasionally amounting to collapse, and the indescribable wretchedness resulting from the remedy would be so great as to require a day's rest. In 1885 I began to use the following combination:

"℞. Pulv. caffeine et
Pulv. morphiæ sulph. ..... āā gr. ½.
Pulv. atropiæ sulph. ..... gr. 1/60.
Aq. camph. ..... ♏ xx.
"M.

"This was employed more than twenty times, and succeeded in every instance, a second injection being required on only three occasions. Excepting intense thirst, the patient felt relief as quickly and more satisfactorily than by the former combination; the heart beats stronger and steadier, collapse and wretchedness never followed, and in about twenty minutes he would resume his duties, and, what is more satisfactory in his case, his dislike to morphia is intensified on account of the thirst induced. With all my other patients I have succeeded as well, and I take care to order grs. iij. of caffeine, with a seidlitz, to be taken three hours after the injection; this clears the alimentary canal and sustains the nervous system.

"Case III.—A youth, aged eighteen, laborer; general health excellent until rheumatic fever set in. I found the patient prone, helpless, and moaning piteously on account of pain in his joints and the præcordial region. Auscultation revealed peri- and endo-carditis; the pulse was 156, small, weak, and intermittent; respirations, 60, shallow and gasping; temperature, 106° F. Twenty minutes after injecting the caffeine mixture the patient was helped to place himself where he could lean against several pillows, and then declared himself as feeling 'just splendid.' The pain, irritability, and dyspnœa had disappeared; the heart beat steadily and strongly, the pulse fell to 120, and in twenty minutes more the patient was sound asleep. So greatly was he relieved that he insisted upon having the remedy administered hypodermatically every night throughout his illness.

"I have treated several cases of acute rheumatism since then, and each has been as signally benefited by this auxiliary, *especially when there were signs of cardiac failure.*

"I have repeatedly used this combination in cases of hysteria, of convulsions in infants and children who were teething or suffering from meningeal irritation, etc., with the best results. In acute alcoholic mania, when the heart begins to falter on account of the duration of the insanity and its concomitants, I cannot speak too highly either of its power to stimulate the heart or of its calmative co-operation with morphia, while maintaining the nervous system and so preventing dangerous symptoms.

"Case IV.—Lastly, I will speak of one case more, to show that the patient's feelings and belief have no influence on the therapeutic action of the drug. The patient

is an elderly lady who suffers from incidental effects of a traumatic stricture of the bowel. At the time of which I speak she was suffering intense pain. A few minutes before I called she had dismissed a quack, who styled himself 'a metaphysician,' because, after four hours' praying, he had failed to relieve her. To test whether her confidence in the 'regular' treatment was as strong as she claimed, I injected ten drops of pure water. In a few moments she declared herself much easier; in five minutes more she expressed pleasure at the great relief she was experiencing. Now, that she really suffered, the vomited matters and pulse showed; but she believed I had injected the caffeine compound as usual, and, as she is sometimes so ill that a repetition of the remedy is required, I told her she must have a second dose to insure a night's rest. Two minutes after injecting the mixture she said she felt strangely, which feeling merged into giddiness. In five minutes more the pulse had lost its usual intermittency and became stronger and slower, the body grew warmer, intense thirst set in, and the patient soon went to sleep.

"A perusal of the foregoing cases must force any reasonable person to acknowledge that, in a general way they prove that caffeine, or a compound containing caffeine as a synergist, does, indirectly, make the injection of morphia a safe proceeding, and directly 'increases the force of the heart and arterial tension.'"

Progress of Medical Science.

ACONITE IN THE FEVERS OF CHILDHOOD.—Dr. W. Barrett Roué, writing in the *Provincial Medical Journal* of May 1, 1886, complains that English physicians make too little use of aconite in the febrile affections of childhood, and urges its more general employment. He gives it in small and frequently repeated doses (one-fourth to one-half minim of the tincture every three or four hours for children three or four years old), combining it with tincture of belladonna (one to two minims) to prevent depression. As soon as the child perspires freely, the medicine has done its work and should be stopped, to be again employed if there be a further rise of temperature. In cases of more than usual prostration he combines the aconite with carbonate of ammonia, and accompanies the mixture with brandy. The aconite, he says, will act equally well in such a combination, and there is nothing unscientific in so prescribing it.

INTRA-PERICARDIAL RUPTURE OF THE AORTA.—Professor E. Winge reports the following case in the *Norsk Magazin for Lægevidenskaben* for June, 1886. The patient, a man fifty-four years of age, had had apoplexy sixteen years before, but had made a perfect recovery. He had had a little malaise and complained of indefinite pains in the shoulder for a few days, but had exhibited no grave symptoms up to the moment when he dropped dead. At the autopsy the pericardium was found distended with blood, and in the connective tissue, between the origins of the pulmonary artery and the aorta, was found a sinus, filled with blood, through which a probe could be passed into the aorta. The intima of the ascending portion of the aorta was found atheromatous and scattered over with numerous ulcerated or calcified spots. The heart was the seat of excentric hypertrophy, the valves and coronary arteries were normal, and the cardiac muscle was pale but not fatty degenerated.

THE PHYSIOLOGICAL EFFECTS OF MASSAGE.—Dr. F. Gopadze has published a series of observations undertaken with a view to determine the effect of massage on the transformation of the nitrogenous principles of food. Though there has been a general tendency among authors to assume that massage increases the assimilative power, no exact observations on the subject have hitherto been published. The author conducted his experiments upon four medical students, who for three consecutive weeks became inmates of Professor Manassein's clinic, and lived on certain articles of food—bread, milk, soup, veal, and roast beef, the quantities ingested being accurately noted. The nitrogen in all the samples of food, and in the fæces and urine excreted, was determined by the Kjeldahl-Borodin process. Massage was practised for from twenty to twenty-five minutes once a day, two or three hours after food. The operations were commenced by *effleurage*, beginning from the extremities and working toward the centre. This was followed by *massage à friction, pétrissage, tapotement*, a second *effleurage* of each part concluding the whole. In all four cases the appetite was decidedly increased, not only during the week in which massage had been practised, but after it had been stopped. The amount of nitrogenous transformation was also augmented during the continuance of massage in all four cases The augmentation persisted in two of the cases, but in the other two the transformation was less during the third than during the first week. The quantity of nitrogen assimilated increased in all four cases, independently of the amount of food ingested. During massage two of the subjects gained slightly in weight, the other two losing weight; but during the week following the one in which massage was practised all four gained. The axillary temperature decreased, for about half an hour after the operation, to an extent varying from 0.1° to 0.5° C., after which it began to rise, attaining its original figure, or from 0.1° to 0.3° below it, about an hour after the end of the *séance*. The respirations became more frequent, and were of a deeper character. The effect on the pulse varied with the character of the massage. When this was carried on lightly, the pulse became more frequent; but when the manipulation was more forcible, the pulse became slower. The effects in both cases persisted for an hour or more after the termination of the operation. In conclusion, the author suggests that massage should prove useful in chronic gastro-intestinal catarrh, in chronic constipation due to an atonic condition of the intestines, also in various cases where there is a lack of tone in the abdominal muscles.—*The Lancet*, May 22, 1886.

THE RELATION OF OSTEOMYELITIS TO ULCERATION.—In a paper read before the Surgical Society of Paris, M. Lannelongue said that one of his horses had had an enormous swelling over the frontal region, accompanied by suppuration, and speedily followed by grave constitutional symptoms and death. The appearance of the disease was preceded by an ulceration in the buccal cavity. This occurrence led the author to examine carefully the bodies of all children brought to him with the commencing symptoms of osteomyelitis, and he found in all cases superficial ulcerations, either of ecthyma or of eczema, on some part of the body. These ulcerations usually preceded the declared symptoms of osteomyelitis by a period of one to three weeks. The speaker thought that possibly these abrasions were the portals through which the specific micro-organisms gained entrance.

TREATMENT OF GLAUCOMA WITHOUT OPERATION.—At the meeting of the Académie de Médecine de Paris of June 15, 1886, M. Panas read a paper on this subject, the conclusions of which were as follows: 1. Myotic collyria, hitherto regarded as simple palliatives, may, in certain forms of glaucoma, be regarded as veritable curative agents. 2. The varieties of the affection which seem to be most benefited by these agents are precisely those in which operation alone (iridectomy or sclerotomy) is often ineffectual. 3. To obtain the best results from myotics, it is necessary to continue their use for a more or less extended period of time. 4. These remedies, in fine, constitute one of the most effective means which we possess for arresting the onward course of the glaucomatous process, when operation has been shown to be powerless to effect this. The author hoped that others would test the efficacy of myotics in glaucoma, and would report the results obtained.

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A NEW MODE OF APPLICATION OF THE PLASTER JACKET IN THE TREATMENT OF SCOLIOSIS.

THE treatment of lateral curvature of the spine is one of the most thankless and unsatisfactory tasks which the surgeon is called upon to undertake, and we venture to say that there are few practitioners of experience who assume with any confidence the management of a case of this nature. The prognosis must always be guarded; the most that can usually be hoped for is that the progress of the deformity will be arrested, and he would be rash indeed who would promise to correct absolutely a true, so-called rotary, lateral curvature of the spine.

Considerable advances have, it is true, been made in the therapeutics of this affection within the past few years. The cumbersome, and sometimes even cruel, forms of apparatus, in common use a decade or two ago, have been very generally discarded, and figure at the present time only in the illustrated catalogues of the instrument-makers. Their place is now taken by some light and comfortably fitted instrument, or by the plaster-of-Paris jacket, and reliance is chiefly placed upon active or passive exercises designed to increase the lateral flexibility of the spine, the mechanical support serving merely to hold the patient in the improved position acquired through these exercises. But, notwithstanding these improved methods of treatment, we are yet far from the attainment of our end—far, that is, from the cure—and not the simple arrest of the onward course of this unsightly deformity. For this reason it is interesting to note the new methods of treatment proposed from time to time, and to read the reports of cures thereby obtained in a marvellously short period by their enthusiastic advocates. And even though experience usually serves to justify our scepticism concerning the real curative value of the proposed methods, we are nevertheless encouraged to recognize some of them as steps in the right direction and as sign-posts guiding us to a more rational system of mechanical therapeutics.

We find in the *Wiener Medizinische Wochenschrift* of May 8, 1886, the details of a modification by Dr. Alexander Fraenkel in the mode of application of the plaster-of-Paris corset, which seems, theoretically, to be a real improvement, but of which it is, of course, too early to speak with any confidence. The writer argues that the treatment of lateral curvature should be conducted on the same plan as that of club-foot, that it is not sufficient to place the vertebral column nearly, or quite, straight, but that the deformity should be over-corrected before the spine is immobilized. The first part of the treatment consists in passive exercises, designed to overcome the abnormal rigidity of the curve to such an extent that the spine can be forced into the reverse position. This is effected in the case of children by placing the point of greatest convexity of the primary curve over the thigh and bending the trunk above and below forcibly downward, in the same manner that one would straighten a bent stick across the knee. Daily séances of these manipulations, of about half an hour each, extended through one or two weeks, are usually sufficient, Dr. Fraenkel says, to render the spine fairly flexible. When this has been accomplished, the time has come for the application of the plaster jacket. The patient is suspended, as in Sayre's method, the hips are firmly fixed, and then two loops of strong bandage are passed around the body, resting against the apices of the primary and secondary curves. In order to avoid pressure-sores the convexities of the curves are well padded. Two assistants, one on either side, now make firm traction on the bandage loops so as to pull the curves in the opposite direction, and the plaster-of-Paris is then applied so as to retain the spine in this position of over-correction. The author does not favor a removable corset, but prefers a frequent reapplication of the plaster, opportunity being taken at each renewal to resume the passive movements.

A somewhat similar method has been proposed by Petersen in Langenbeck's *Archiv*, Heft i. Bd. 32. He places the patient in a position of lateral suspension in Barwell's sling, the weight of the body acting as the correcting force. This plan does away with the necessity of so many assistants, but it is evident that a less efficient force can be thus brought to bear upon the scoliosed spine than when lateral traction is made by bands.

Fraenkel says that his success thus far has been encouraging, though the method is too young as yet to be judged by its results. It is, of course, only applicable to comparatively recent cases, or rather to those cases in which, whatever the degree or age of the curve, the lateral flexibility of the spine is still present. Old cases of scoliosis, in which extensive alterations have taken place in the shape of the bones, and in which the vertebræ are so soldered together that the spine is as rigid as a solid bar, unfortunately are, and always will be, beyond the possibility of rectification.

NARCEINE IN WHOOPING-COUGH.

AT a recent meeting of the Société de Biologie, MM. Brown-Séquard, Laborde, and d'Arsonval united in praising the effects of narceine in whooping-cough and chronic bronchitis with hypersecretion. Narceine, $C_{23}H_{29}NO_9$, is one of the alkaloids of opium, but exists in it to a very small amount, at most not over 0.02 per cent. Most investigators agree that in its action upon man it resembles morphine, but is milder and causes no excitement. Claude Bernard first called attention to it by his assertion that it was a safer and more agreeable drug than morphine, but had about the same sedative and anodyne effects. Narceine was carefully tried by several Phila-

delphia physicians, some fifteen years ago, and they concluded that it was almost inert, even in doses of from one to five grains. Froumüller states that he has given twenty grains with no effect. On the other hand, many Continental physicians (Rabuteau, Behier, Debout, Eulenburg, Liné, and Laborde) have found that in doses of one-half to one grain it causes quietude and sleep.

The testimony heretofore has been so conflicting that doubts have arisen as to whether the same alkaloid has been used. M. Laborde now says that a very easy test of its purity is to add to the solution a drop of muriatic acid, when a beautiful blue color is produced.

Surprisingly quick results in whooping-cough have been observed by the French physicians above mentioned. The best mode of administration is to make a solution in syrup, so that a teaspoonful represents one centigramme of the drug. This is the minimum dose for children, the average dose being from 2½ to 5 centigrammes.

AN AMERICAN CONTRIBUTION TO BACTERIOLOGY.

Dr. J. W. McLaughlin, of Austin, Tex., has been carrying on a series of experiments in order to determine the nature of dengue, a disease which prevailed epidemically throughout Texas in the fall of 1885. As dengue presents all the clinical characters of an infectious disease, Dr. McLaughlin's researches were designed to discover, if possible, the presence of a parasite. The exceedingly difficult nature of the task in question was fully realized by the investigator; and we are glad to say that the details given of his work show him to be thoroughly imbued with the spirit of the careful searcher after truth. Dr. McLaughlin's work, carried on amid all the difficulties that attend one engaged in active practice, deserves the attention, and should awaken the pride, of every American physician; for he has shown, as Koch did, that after all, leisure, money, and elaborate appliances are not absolutely necessary for scientific work, and that the general practitioner who folds his hands and says he has no time for anything but practice, is really handicapped not so much by his surroundings as by his own indisposition.

Dr. McLaughlin, so far as we can judge by his report (*Journal of the American Medical Association*, June 19, 1886), used all the numberless precautions necessary in investigating the nature of the blood of dengue patients. He examined microscopically fresh specimens, as well as others that were dried and stained, and sterilized. He also obtained pure cultures of a micro-organism, and watched its growth in successive cultivations.

He believes that there is always in the blood of these patients a peculiar micro-organism, having its own method of growth, and taking up with especial avidity a stain of methyl-blue dissolved in caustic potash. This micro-organism is spherical in shape, and about $\frac{1}{2}\frac{1}{0}$ to $\frac{1}{2}\frac{1}{0}$ the diameter of a red blood-cell. The organisms grew well upon sterilized jelly, always preserving their morphological character in successive cultures. All the experiments seemed to show that the blood of persons suffering from dengue contains these micro-organisms, and no other.

Inoculations of the pure cultures were not made, apparently, and this seems strange, since dengue is a mild disease, and there should be no difficulty in finding subjects of experiment. It cannot be said either that this micrococcus is not identical with that found in other diseases. Dr. McLaughlin's experiments, therefore, are not conclusive of anything, as yet, but they furnish an important stepping-stone for further research. Dr. McLaughlin has come quite near being the first American physician to find the specific micro-organism of a disease affecting man. American investigation, so far, has been confined to imitating the work of European investigators.

ICE-CREAM POISONING.

The summer season has been ushered in by numerously reported cases of poisoning from eating ice-cream. The two most important instances are those which have occurred in Michigan and in New Jersey. In the latter case, a large number of persons were attacked, shortly after partaking of the cream, with all the symptoms of a gastro-enteric irritant poisoning. The clinical aspect of the cases strongly suggested arsenic. There is some reason to suppose (so say the daily papers) that the cream was tampered with by persons having criminal intent. Several parties are under suspicion, and a legal inquiry is now in progress.

In the Michigan case, over one hundred and forty persons exhibited symptoms of irritant poisoning after having eaten the cream. A portion of the latter was sent for analysis to Professor Vaughn, of Michigan University. He reports, it is said, an important discovery made during his tests. He says that he had a short time previously isolated an active element in poisonous cheese. This substance he has named tyrotoxicon. He says, also, that traces of this body were present in the suspected ice-cream, and that to it, in his opinion, were the irritant symptoms due. On this assumption it is claimed that tyrotoxicon is due to the decomposition of milk, and may be developed in any milk kept in unclean vessels, or in an unwholesome atmosphere. The germ giving rise to this new product seems to propagate very rapidly, and as is the case with all other similar organisms, a small amount will speedily infect a large body of milk.

A very important fact, and one of great medical interest, is implied in the foregoing. It may account for much of the intestinal disturbance in children during the warm weather, notably cholera infantum, and kindred conditions. Professor Vaughn's report to the State Board of Health will be awaited with interest.

REORGANIZATION OF THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL.

Despite the increase in other hospitals, Bellevue continues to be by far the largest institution in the city, or country, for the treatment of acute diseases, and it is still regarded by the colleges as the most important centre for clinical teaching. The hospital has provision for 1,200 beds, the actual number being 800, and it treats in its wards nearly twelve thousand patients (in 1885, 11,894) annually, while its out-door department each year relieves 33,000 persons.

Realizing the importance to the colleges of the hospital, the commissioners, some years ago, established the rule which gives an equal representation on the Medical and Visiting Board to each of the three large colleges,

and to the non-collegiate portion of the profession. The out-door department of the hospital, however, has not been so divided, but has been practically in the control of one college.

At a recent meeting of the commissioners, the Medical Board of the hospital was requested to draw up a plan of reorganization of this out-door department, which plan should place it under the control of the Hospital Board, and give to each college, and to the non-collegiate division, an equal share in the appointments at the dispensary. Such a plan has been drawn up, and will, we understand, soon go into effect. The result will be not only to give a just distribution of the clinical material, but the non-collegiate division of the Hospital Board, which represents, in part, the post-graduate school and polyclinic, has also its share. The result of the reorganization will, it is hoped, be a greater activity and efficiency in attending to the patients, and a juster distribution and more satisfactory use of the clinical material.

FEHLING'S TEST AS A REAGENT.

Of the various tests for sugar in urine the copper solution of Fehling has become popular on account of its simplicity and general reliability. Undoubtedly, the best form for using this test is the preparation made by Squibb, of Brooklyn, which is made in proportions recommended by Sutton in his work on "Volumetric Analysis," where each cubic centimetre under definite conditions is equal to 5 milligrammes of glucose; hence the 2 c.c. used for the testing are equivalent to 0.01 gramme of glucose, and that amount in 1 c.c. of urine is just one per cent. The two solutions, which are sold separate and accurately prepared, enable the tests to be used both qualitatively and quantitatively. The latter, however, is only roughly approximative, but still indicating 1 per cent., 0.25 per cent., and 0.1 per cent., according to the color shown and behavior of deposit. These results are sufficiently accurate for all practical purposes, and may be used at the bedside.

We now notice in a contemporary that a new use of Fehling's test-liquor has been suggested. It is said that if 1 c.c. of the test is mixed with 8 to 10 c.c. of urine, shaken up and boiled, and the fluid remain blue, nothing is indicated; but if decolorized with a pale yellow, flocculent precipitate, *peptone* is indicated. If the liquid turns orange and there is an orange precipitate, of course we have glucose.

If equal parts of Fehling's liquor and urine are mixed in a test-tube and boiled, and the clear liquid remain blue, there is little uric acid. If it becomes green, the urine contains an excess of uric acid or of a urate. If the precipitate is scanty, there is little phosphoric acid, but if copious phosphoric acid is present in excess. If these new reactions of Fehling's test be confirmed, they will undoubtedly prove of interest to the uroscopist.

The Attempt in this City to inoculate a boy who had been bitten by a rabid dog, with the preventive virus, has, it is said, been given up. Several inoculations were made by Dr. V. Mott, but the boy began to show such severe nervous symptoms that it was thought wise to discontinue the treatment.

News of the Week.

A Hasty Indorsement.—At the last meeting of the American Medical Association the following resolution was adopted by a majority of 159 to 106: "*Resolved*, That cremation or incineration of the dead has become a sanitary necessity in populous cities, and that this Association advises its adoption." This is an example of the hasty and careless action which too often characterizes our societies. While cremation is an excellent thing for those who like it, it has not yet been demonstrated that it is "a sanitary necessity in populous cities." The cremationists have not yet been able to trace a disease, much less an epidemic, to the suburban graveyards of our populous cities. We have always commended the practice of cremation as an advance in sanitation, but it is too soon to call it a necessity.

Dr. John B. Hamilton, Supervising Surgeon General of the United States Marine Hospital service, has accepted the Professorship of Surgery in the Chicago Polyclinic.

The Emperor of Brazil has commissioned M. le Dr. Ferreira dos Santos, of Rio Janeiro, to proceed to Paris and study Pasteur's method, for the purpose of establishing later an institute in Brazil.

Cremation on Long Island.—Since December 4, 1885, there have been forty-five bodies cremated at the Crematory of the New York Society, Fresh Pond, L. I.

The Fight against the Microbe Theory.—At the meeting of the Académie de Médecine, some weeks ago, Professor Le Fort strongly attacked the microbists, and referred to the experiments of Rose, of Zürich, who left amputated surfaces exposed to the atmosphere, *et aux fureurs de tous les microbes*, without appreciable detriment to his patients, and contrasted it with that of Billroth, who, with identical hygienic conditions, had results less fortunate, although he invoked every possible antiseptic precaution. He also stated that he had tried similar experiments, having left two stumps—one at *Beaufort* and the other at *Hôtel Dieu*—entirely unprotected for several days, without the slightest interruption of the process of cicatrization or the development of any constitutional disturbance.

Medical Progress in Chicago.—Dr. Gregory writes to the *Medical Press* of Western New York his impressions on visiting Chicago after a six years' absence. He says: "In the six years last past the medical element of Chicago has developed beyond the stage of personal gain, and reached that of public benefit. Physicians there are not now telling of the number of prescriptions written in a day, so much as they are detailing anomalous conditions met with. To be sure, even a professional man, breathing a truly professional spirit, cannot live in Chicago without becoming imbued with a business fervor; consequently nearly all physicians have a down-town office as well as one at their residence. This peculiarity is very noticeable, as sometimes as many as twenty-five physicians are grouped in down-town offices over a drug store. St. Louis is the only other city

where this concentration of physicians' offices down-town and over drug-stores occurs so conspicuously. While in this feature Chicago differs from Eastern medical centres, she now resembles them in multiplied agencies through which physicians render the public gratuitous service. Six medical societies and an unknown number of clubs are maintained, and eight medical journals are published in the city. With this mass of public work and the large number of men thus engaged, it must be evident that a far different professional spirit would be engendered than without such agencies. Chicago must therefore be recognized as the medical centre of the West. Undoubtedly one of the agencies tending to produce this result is the State medical law, for in marked contrast to its previous condition is the present absence of charlatan advertisers and nostrum doctors."

A CHRONOMETER for measuring the swiftness of nerve-impulses has been devised by M. D. Arsonval. It is said that it can be easily managed by the clinician or practitioner.

"PROGRESS" is the title of a new monthly medical journal edited by the experienced journalist, Dr. Dudley S. Reynolds, and published in Louisville, Ky.

A "NEW" TREATMENT FOR GONORRHŒA.—Dr. Edward Warren Bey, writes to *Gaillard's Medical Journal:* "There has been a new departure announced in the treatment of that opprobrium of the profession, *gonorrhœa.* Dr. Bourgeois, in an article published in *The Archives of Military Medicine and Pharmacy,* takes the position that the discovery of the special *microbe* of this disease furnishes the indication for its specific and certain cure. The problem resolves itself into the task of finding some topical agent sufficiently energetic to destroy the parasite without irritating the urethra. There are three such agents, according to Dr. Bourgeois' experience, viz.: permanganate of potash, bichloride of mercury, and sulphate of quinine—the first of which he employs in a solution of 1 to 2,000, the second in a solution of 1 to 20,000, and the third in a solution of 1 to 100. He recommends that these solutions shall be first warmed, and then injected in such a way as to reach every portion of the urethra four times daily—the last injection being made invariably at midnight, so that the *microbes* may not have time to reproduce themselves. Internally, he administers from one to two grammes of bromide of potash, and in scrofulous cases he supplements it with a daily dose of cod-liver oil and the potassic tartrate of iron. According to his statements, the disease is more rapidly and permanently cured by this treatment than by any other—the special indication being the destruction of the gonorrhœal gonococcus, and its elimination from the urethra.

LISTER'S LATEST ANTISEPTIC DRESSING.—A correspondent of the *Canadian Practitioner* writes: "It may be news to a great many to learn that Lister has discarded the use of the spray almost entirely. He now uses salalembroth exclusively in his wards for dressings, and it has so far given very fine results. It is a double mercurial salt formed by the sublimation of a mixture of perchloride of mercury and chloride of ammonium, and is exceedingly soluble. The salt was known to the alchemists, but has not been used in medicine in modern times. Lister prepares all his dressings now with a 1 to 100 solution of this—gauze, cotton-wool, lint, bandages, draw sheets, and where the wound is covered by the shirt it is rendered aseptic by dipping it in the solution and drying before the fire. To make any of these dressings, all that is necessary is to soak them in this solution and dry. Not being volatile, it does not require to be kept sealed in tin cases. He also colors these dressings with aniline blue 1 to 10,000; the benefit to be derived from this is that wherever an alkaline discharge comes in contact with the dressing the blue is removed and turns reddish, enabling one at once to see where the discharge has been, if the quantity was ever so small and had dried up before the dressing was removed. There is one precaution in using this dressing, and that is this: the dressing being dry and frequently handled might have some septic matter from bedclothes, hands, etc., so he always dips it in 1 to 2,000 perchloride just before applying it. He is making a salalembroth protective, which will be surcharged with the antiseptic, so that as a discharge comes through a dressing it will come in contact with this protective and can be kept aseptic."

THE ASSOCIATION OF AMERICAN PHYSICIANS.—The *Journal of the American Medical Association* makes a long attack upon The Association of American Physicians and Pathologists, and alludes very sarcastically to the "so-called American Ophthalmological, Otological, and Gynecological Societies." Its Washington correspondent questions the right of a hundred medical men to associate themselves together and call themselves The Association of American Physicians, and he asks if "the American Medical Association is to be degraded by a set of men in its own ranks?" At the same time the *Journal* says that it is not prompted by any feeling of opposition to the new Association, only it wishes it to sail under its own flag. The tone of the article is one of petulance and ill-will. It is not creditable to the *Journal.* The "so-called gynecological" and other associations do not need defence, however, any more than they deserved attacks.

A CURIOUS CASE OF MEDICAL ADVERTISING was brought up for the consideration of the Medical Society of North Carolina at its last annual meeting. It seems that Dr. Oscar Gregory, a physician who had been in good standing, moved to the town of Oxford, N. C., and having prepared to practise in that locality, he had printed a number of handbills setting forth the date and place of his graduation, the various positions of distinction he had held, the length of time of his professional services, concluding with the announcement that, "having always enjoyed a liberal patronage from every community in which he has lived, he is encouraged to hope for the same from Oxford, where he has determined to make his permanent home. Charges will be the same as those of the physicians of Oxford. He also claims to possess that charity for which his profession has always been so justly distinguished." The Board of Censors having charged him with violating Section I., Article 2, of the Code of Ethics, Dr. Gregory replies defending his course; he says, "I had not read the Code in some time before the circulation of the advertisement to which I

suppose you refer. But, after a careful perusal of the section mentioned, I fail now to perceive how the freest rendering of it prohibits a doctor from placing before a new community his proper credentials as a physician. I conceive, if this is not his privilege, he has no right to ask the patronage of that public. If, however, you, as the Board of Censors, interpret it thus, I submit, and would be glad to have the specific infraction explained to me." The Board refused to consider Dr. Gregory's explanation tenable, holding that the issuing of handbills was not permissible under a just interpretation of the Code. The Society very properly sustained the Board.

A Belgian Prize Taken by an American Physician.—The competition instituted by L'Académie Royale de Médecine de Belgique in 1881, and continued through 1883, is closed, and the report of the commission of the Académie is made known. The question submitted was: "To Elucidate by Clinical Facts and by Experiments the Pathogeny and the Therapeutics of the Diseases of the Nervous Centres, and especially of Epilepsy." A number of memoirs were submitted, which were entered by European authors of pre-eminent rank in this department of research. The honors of the competition have, however, been awarded to an American physician, Dr. George T. Stevens, of New York. His memoir is the only one selected by the Royal Academy for publication, and the only one for which an award was made.

An Inconsistent Critic.—The *Weekly Medical Review* chooses to read us a lesson for publishing the fact that the St. Louis Medical Press Association invited a homœopath to its dinner, and intimates that The Medical Record is "uncertain, hybrid, narrow, provincial, and dishonest!" This is a rather sweeping charge, truly, to come from a quondam host. All that need be said is this: The hospitable editors of *The Review* invited to their dinner a homœopath. Yet it defends the policy of an association which forbade him membership, on moral grounds. Its course is very much like that of a man who invites a guest to his home, and then hurrahs for the crowd that would besplash him with mud as soon as he gets out of the door. We do not say that such conduct is "hybrid, narrow, or provincial," but it is, at least, not very consistent. We do not criticise *The Review's* list of guests, but rather praise its liberality, and are gratified for the courtesy of its editors.

Iodide of Ethyl is recommended by Dr. Bartholow in the treatment of brain syphilis when a prompt action of the iodine is desired.

The Woman's Medical College of New York.—Dr. H. M. Silver has been appointed Professor of Surgery in the Woman's Medical College of this city, and Dr. W. Meyer, Clinical Professor of the same branch.

The Medical Department of Niagara University.—Dr. W. A. Wheeler, Surgeon, United States Marine Hospital Service, has been appointed Professor of Surgery in the above institution, vice Dr. W. S. Tremaine, resigned. Dr. C. M. Daniels has been appointed Professor of Anatomy, vice Dr. William H. Heath, resigned.

The Abuse of Medical Charity.—On the ground, we presume, of the acknowledged fact that there is an excessive and pauperizing amount of medical charity in the larger cities, the Erie County Medical Society recently voted to oppose the granting of any appropriation of money for dispensary purposes by the Board of Supervisors of the county.

A Combined Board of Medical Examiners Wanted in California.—The State of California has a medical registration law which creates three Boards of Medical Examiners—one regular, one homœopathic, and one eclectic. Each board licenses the physicians who practise in these respective "schools." The plan does not work well, and the *Pacific Medical and Surgical Journal* urges the substitution of a single combined board.

Deciding against a New Medical College.—The Committee of the Medical Society of South Carolina, to whom was referred the question of the establishment of a medical school in connection with the University of North Carolina, reported that "there is no necessity for the addition of a medical department to the State University, and at present the scheme is utterly impracticable."

Enforcing the Medical Law in New York.—A long-haired, elderly man, calling himself Dr. George R. Harding was arrested on July 12th on a charge of practising medicine without a license. He is the head man of an "Indian village," encamped at Eighth Avenue and One Hundred and Twenty-eighth Street, from which placards are distributed advertising the cure of all diseases by means of "Indian Sagwa." An agent of the County Medical Society took his son, aged eight years, to the village for treatment on Friday. The "doctor" said that the boy had eczema, and sold the father some "worm-killer" and a bottle of ointment. In court he said that he was only an agent for a patent medicine firm, but he was held for $300.

A Pasteur Institute has been founded at Milan, under the direction of Dr. Barattieri.

Dr. Brown-Séquard has at last been elected a member of the Paris Académie des Sciences.

To Make the Punishment Fit the Crime.—The papers circulate the following story about an English surgeon. We are glad that such things do not occur in this country. An English surgeon a few days ago performed an operation on a little boy. The operation was comparatively trifling. The mother and the father and the little boy were in the surgeon's house just a quarter of an hour. "What is your fee?" said the father. "A hundred guineas," was the reply. The father was startled, and said he had not a hundred guineas. "Oh! then I will take fifty guineas." "But I cannot afford it," said the father; "and had you told me what your charge would be, I would not have come." "Then I will take twenty-five guineas." After a little more delay the surgeon took ten guineas on account.

Influencing Sex in Utero.—Dr. Alfred L. Carroll writes: "The letter of Dr. William H. Cook, under the above heading, in your issue of the 10th inst., while it recites some interesting coincidences, does not seem quite in accord with 'the sum of the information' accessible to the 'profession at large' in relation to the

subject in question. Aside from any argument based on the comparatively limited experience of individuals, it is certain that in the vast majority of marriages the first cohabitation occurs at a time when, according to Dr. Cook's hypothesis, a male child should be the fruit; but in the accessible statistics of nativity the male births of primiparæ outnumber the female by only about ten per cent. It is, of course, impossible in most instances to determine the particular act of coition which has caused impregnation, and the preponderance of males in still-births must be to a considerable extent placed to the account of primiparæ; but there still remains a sufficient multitude of first-born females to cast doubt upon any relation between sex and time of conception. Moreover, the idea advanced by Dr. Cook is not borne out, as far as my observation goes, in the lower animals, especially in the case of dogs and horses, where the time of intercourse can be positively ascertained. I should not trouble you with this note were it not that the embryological point involved is important, and that its scientific consideration demands more data than we yet possess."

Squier Littell, M.D., of Philadelphia, who died at Bay Head, N. J., recently, aged eighty-two years, was a member of the Philadelphia City and County Medical Societies, of the College of Physicians, and a licentiate of the Academy of Medicine of Buenos Ayres. His contributions to medical literature, extending over a period of fifty years, were very many. In 1828–29 he edited *The Journal of Foreign Medicine*. His most important work was his "Manual of the Diseases of the Eye," which was issued both in this country and England. He edited the American reprints of "Walton's Ophthalmic Surgery." For thirty years he was surgeon to Wills Hospital, Philadelphia.

Those St. Louis Pictures.—Dr. William A. Hammond was the only New York physician who was honored with a portrait and biography in the daily papers of St. Louis during the last meeting of the American Medical Association at that place, so says *Daniel's Texas Medical Journal*. We retract our intimation that New York was slighted.

The United States Naval Medical Department.—A correspondent of the *Globe-Democrat* has set in circulation the following account of the Medical Department of the United States Navy. The statements are certainly much exaggerated. He says: "The position of surgeon in the navy is not an enviable one. The examination that applicants are required to undergo is very rigid, and, as a rule, physicians who are capable of passing the ordeal can find fields for their usefulness more congenial to their taste and very profitable to them by engaging in private practice. When a physician obtains a position in the navy he is assigned to the steerage, without rank, and is given an ordinary salary. In the army it is the reverse. When a physician joins that branch of the service he is commissioned a second lieutenant and is paid accordingly, and commands all the respect the position is entitled to. The result is that there are no vacancies in the army, while there are over two hundred candidates for positions. In the navy there are fifteen vacancies, with no applicants to fill them."

The Cholera is extending quite rapidly in Italy. A large number of cases are reported daily at Brindisi, Latiano, and Fontana.

We perhaps owe an explanation to our esteemed contemporary, *The Medical and Surgical Reporter*, for blaming its editor because his name appeared in the papers and in advertising pamphlets indorsing a proprietary and specific mineral-water. The Old Code does not expressly forbid this practice. The New Code does do so. Perhaps this is the reason that our staid contemporary has shown such aversion to the latter. The New Code says: "It is reprehensible for physicians to give certificates attesting the efficacy of wines, mineral-waters, health-resorts," etc.

Regulating the Practice of Medicine in North Carolina.—*The North Carolina Medical Journal* comments in a courteous and judicial manner upon the letter published recently in The Record by a "North Carolinian." The editor says: "We think that 'North Carolinian' has not understood the temper and disposition of the medical profession in the State if he believes that anything was contemplated by them save to have a law enacted which would give to the people of the State better doctors. We know, also, by some of his allusions that he has in his mind certain *soi-disant* leaders who do not represent the profession. It is very humiliating, not more to the representatives of the younger than of the older class of physicians, to see exhibitions of gross ignorance upon the witness-stand and elsewhere, but this does not justify the sneer which he cast upon all of the older men of the profession in the State."

Explosion at a Hospital.—One of the wards of the Portsmouth (Eng.) Military Hospital was wrecked not long ago by a gas-explosion. There were several patients in the wards, but they all escaped injury. One man, who was delirious, tried to jump out of the window, and was with difficulty restrained.

An English Professor's View of the Importance of Latin.—Professor M. Charteris, of Glasgow, in an article on "Prescriptions," in the *Provincial Medical Journal*, says: "Every qualified medical practitioner, on being called to a patient, is expected, in addition to dietetic rules, to embody his ideas of medicinal treatment in the form of a prescription. This prescription is written out in Latin—a language which should be familiar to every educated man. It is the masonic badge of our profession, and he who is ignorant of it and its grammatical construction is an interloper in the practice of medicine, although he may be dubbed M.D. by a university, or receive the license of physician and surgeon by conjoint corporations."

A Curious Discovery, bearing upon the Phenomenon of Sleep, has been made by Mons. E. Bouchard (*Comptes Rendus*, cii., p. 727). Some experiments made by him on the difference in urine produced during sleep and during wakefulness have shown that the former has a convulsive action on animals, and the latter a narcotic one. He therefore concludes that the body while awake elaborates a substance which causes sleep, and when asleep produces a something which can cause muscular shock and provoke wakefulness. It may be hoped that

further investigations will enable him to detect the substance causing natural sleep, so that it may be turned to account in therapeutics.

THE USE OF CONDIMENTS BY THE SICK.—Dr. William A. Hammond says, in *The Journal of Reconstructives:* "It is rarely the case that sufficient attention is given to the use of condiments in the sick-room; they are often either altogether excluded, or the patient is allowed to take them at his discretion, whereas much benefit will frequently be obtained by the judicious employment of these important agents. In certain low fevers of typhoid type, and in almost all malarial disorders, condiments may be largely used with advantage. Probably no one of them is more generally efficacious than black pepper. Mustard is also frequently relished, and we all know how grateful to us in our illnesses a little vinegar has been. In inflammatory affections of the stomach and bowels the stronger condiments, such as pepper, cayenne, mustard, and horseradish, are seldom admissible; but many cases of diarrhœa are very decidedly benefited, especially when they occur in persons who have somewhat run down in general health, by black pepper, cayenne, or mustard, taken in quantities far above those which a healthy person would be likely to ingest. I have frequently known severe cases of diarrhœa to be cut short by a few doses of twenty or thirty grains each of cayenne, taken either in a little water or syrup. Black pepper is well known to be a remedy of no mean power in the common fever and ague of this country; it will often cut short attacks with as much promptitude as would large doses of quinine."

DIETETIC FALLACIES.—1. That there is any nutriment in beef-tea made from extracts. There is none whatever. 2. That gelatine is nutritious. It will not keep a cat alive. Beef-tea and gelatine, however, possess a certain reparative power, we know not what. 3. That an egg is equal to a pound of meat, and that every sick person can eat them. Many, especially those of nervous or bilious temperament, cannot eat them; and to such, eggs are injurious. 4. That because milk is an important article of food, it must be forced upon a patient. Food that a person cannot endure will not cure. 5. That arrow-root is nutritious. It is simply starch and water, useful as a restorative, quickly prepared. 6. That cheese is injurious in all cases. It is, as a rule, contra-indicated, being usually indigestible; but it is concentrated nutriment, and a waste-repairer, and often craved. 7. That the cravings of a patient are whims and should be denied. The stomach often needs, craves for, and digests articles not laid down in any dietary. Such are, for example, fruit, pickles, jams, cake, ham, or bacon with fat, cheese, butter, and milk. 8. That an inflexible diet may be marked out, which shall apply to every case. Choice of a given list of articles allowable in a given case must be decided by the opinion of the stomach. The stomach is right, and theory wrong, and the judgment admits no appeal.—*Technics.*

NOTES ON SOME NEW REMEDIES.—Some physiological experiments made with the dog mercury (*Mercurialis perennis*), by Dr. Hugo Schulz, to ascertain whether the plant really possesses the poisonous properties attributed to it, show that although in no case it proved fatal, yet it produces a paralyzing action on the muscular apparatus of the bladder, and decreases the peristaltic action of the bowels, while at the same time the quantity of urine excreted is considerably increased, and more or less diarrhœa is present. A new alkaloid has recently been extracted from manaca-root, and is named *francisceine*, after the plant which yields it, which is *Franciscea uniflora.* The alkaloid is said to have a very powerful diuretic action, and to possess, in addition, emmenagogue and diaphoretic properties. Under the name of *Pingo pingo* a new drug has lately been imported into Hamburg from Chili. It has been identified as *Ephedra andina* (*Gnetaceæ*), and, like other species of the same genus, is reputed to possess diuretic properties and to be useful in certain diseases of the bladder. A narcotic principle, to which the name of *Kelline* has been given, has been obtained by M. Moustapha from the *Ammi Visnaga*, the El kellah of the Arabs of Algeria. It is an umbelliferous plant, having an aromatic taste, the seeds of which have been used as a diuretic and aperient, and to form a mouth-wash in gingivitis and dental caries. The narcotic principle was found, in the experiments made upon animals, to cause vomiting, paralysis of the hinder extremities, slowing of the respiration, and irregularity of the heart's action.—*Prov. Med. Journal.*

A SOURCE OF VEGETABLE MUSK.—Dr. A. G. Chase, of Millwood, Kan., writes: "I would like, through THE RECORD, to call the attention of pharmacists to a probable new source of vegetable musk, viz., the tips or latest growth of watermelon-vines. I have not attempted to extract it, but each year, for the past six or eight, I have had it in mind to call public attention to it. On the fresh growth of the vine the pure musky odor is very strong—almost overpowering; and if easily extracted, the abundant source of supply would admit of this somewhat valuable medicine being sold more cheaply."

GALEN ON THE TREATMENT OF OBESITY.—"The best method of getting thinner consists in gradually withdrawing from the body that whereof there is superfluity, and in strengthening at the same time those parts which had been expanded. Bodily exercise will undoubtedly prove very advantageous, as we see stout horses getting lean by heavy work. Thus, likewise, those will never grow fat who are obliged continually to toil with hard labor. This, however, requires great precaution, it being certain that fat people frequently run danger of death when attempting violent bodily exercise." And Galen says: "Regular alvine motions, energetic bodily exercise, a moderate life, a diet which, although satiating, yields but limited nourishment; which explain why Hippocrates advises stout people wishing to grow thin to dine on vegetables cooked with fat, in order that they may become satiated by a small quantity of food."

BETTER THAN THANKS.—The Dental Association of the Province of Quebec held its annual meeting in the hall of Laval University, in Montreal, which was placed at its disposal by the authorities of the University. At the conclusion of the session, instead of the ordinary vote of thanks, the Association expressed its gratitude by a gift of fifty dollars to the medical library of the University.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-first Annual Session, held at Winchester, Ky., June 23, 24, and 25, 1886.

(Concluded from page 49.)

DR. JOHN L. TAYLOR, of Bowling Green, read a paper on

INJURIES OF THE HEAD.

He reported the case of a boy who received a severe blow on the head.

DR. J. H. LETCHER, of Henderson, reported a case of

MANIA AFTER CATARACT OPERATION.

He operated one year ago on a well-preserved old gentleman, Mr. B——, a farmer, who had been blind for some time from a mature cataract of both eyes. Shortly after the operation Mr. B—— became insane, and thought everyone was mistreating him. He was without fever and the pulse was normal. Morphia gave relief. He thought it might be due to the drops of atropia instilled into the eye. There were no other signs of atropia-poisoning present. He queried could this disturbance be due to the closure of the eyelids and the effect of the bandage; could it be due to confinement, the forced recumbent posture in a man wont to be active, or might the unaccustomed noise about the house be to blame.

DR. E. WILLIAMS reported a similar case.

DR. J. G. CECIL, of Louisville, read a paper on

PUERPERAL FEVER.

He paid especial attention to the treatment. Puerperal fever he considered puerperal septicæmia, or surgical fever allied to the puerperal state. No better being given we may pin our faith to micrococci as the most probable cause. Prevention is the great thing. Absolute cleanliness in every detail. We should give attention to ventilation and sewerage. Nearness to water-closets is prejudicial. Bathing the external genitals with antiseptics is a good practice. The proper care of the uterus in a case of labor in private is to let it severely alone, being always ready for an emergency. The indications for vaginal injections should be present before this dangerous practice is undertaken. In such proportion as the case has been difficult or protracted is the demand for intra-uterine injections. He did not wish to convey the idea that vaginal or uterine injections will always prevent puerperal fever.

Management: Improvement in this line has been perfectly wonderful. Temperature, pulse, and odor of the lochia are the indications for the douche. The solution *par excellence* is bichloride 1 : 1,000 to 1 : 10,000, always given hot.

SECOND DAY—EVENING SESSION.

DR. J. A. LARRABEE, of Louisville, made the

REPORT ON PEDIATRICS.

In the broad and open field of pediatrics we have great opportunity to use preventive medicine. Two-thirds the whole number treated in his children's clinic are the effects of syphilis. He reviewed methods of acquiring syphilis. Within four months I have treated two young men with chancre on tongue, four young ladies with chancre on lips, latter by kissing. As to mercury, it does not differ what preparation you use, as it acts as the bichloride. He greatly prefers the inunctions of the old-fashioned blue ointment. He next discussed the subject of medical legislation, which he thought must be the result of education, and where is the education to come but through the profession? We have not yet attained the medical wisdom of Solomon nor the sanitation of Moses. He compared the present rage about hydrophobia to the amount of damage done to humanity by hydrophobia and syphilis. How often do we hear ringing in our ears at the marriage ceremony these words, "who knows aught," etc., when we know all too much. The licensing of prostitutes for one year in St. Louis reduced syphilis thirty-five per cent. Had it been continued what would have been the result?

DR. AP MORGAN VANCE, of Louisville, read a paper on

THE ORTHOPEDIC SURGERY OF TO-DAY.

He said that the orthopedist had been accused of going outside of his specialty. This belief grew from an ignorance of the field of the orthopedist. He gave as a fair definition of the word the following: That branch of surgery which takes into consideration the treatment, cure, or palliation of diseases which tend to cause deformity of bones and joints. He discussed spinal caries, diseases of the hip-joint, elbow, burns, cicatrizations, and congenital deformities. In treatment he gave special laudation to rest.

DR. GEORGE W. RYAN, of Cincinnati, said he was sure that every orthopedist will thank Dr. Vance for his broad definition of the work of the orthopedic surgeon. In common with other specialists the orthopedist is at times accused of stepping outside the limits of his work if he resorts to operative or other measures supposed to belong to the general surgeon. But as the reduction and cure of deformity is his profession, the means which are employed, be they the knife or the apparatus, have only a scientific interest.

The paper has much in it on which we can all agree, and the author is to be congratulated on the excellence of his result in the case reported. But there are some statements to which I might take exception, notably those concerning the treatment of lateral curvature of the spine and the rachitic deformities.

I should be very far from agreeing to what the author justly terms the bold statement that the

MECHANICAL TREATMENT

of lateral curvature is unsurgical and cruel. I do not doubt he may find authority for this, but the judgment of most orthopedists is decidedly the opposite.

The mechanical treatment may possibly be considered of only secondary importance to the gymnastic exercises, the faradism, and the massage; but I believe it is of great value in securing a good result or in preventing an increase in the curvature. Certainly in my own case I have no reason to be dissatisfied with it. The

PLASTIC DRESSINGS,

so generally used, may certainly be considered unsurgical and cruel, for they are neither scientific nor satisfactory.

The value of proper and systematic exercise with

FARADISM AND MASSAGE

is unquestioned. Mechanically I have been using for the past two years elastic force over the convexity of the curve. This is obtained by using the heavy elastic webbing, such as the manufacturers of artificial limbs employ in their work.

A simple, light, steel frame is employed in order to get the fixed points. This is held by the ordinary corset front to the patient's body, a light pad being placed over the point where the pressure is to be made. The pressure is even, yielding to a certain extent, and its use is not followed by any pain. This apparatus, in conjunction with the adjuvants mentioned, has done excellent service. In one case of typical rotary lateral curvature it has been diminished a little more than one-third, and in others the treatment has been the means, in my belief, of arresting the growth of the curvature.

The views of Mr. William Adams, who is always con-

servative and always sound, are entitled to the very highest consideration. He says, in the last edition of his work on this subject (p. 280): "I can only say that after an experience of thirty years I shall adhere to the employment of spinal instruments in many cases, with the object and within the limit I have defined."

Concerning the statement that the rachitic deformities, such as bow-leg and knock-knee, should be held over until from three to five years for an osteotomy, I should say this was not altogether wise. Of course, if the bones have become thoroughly hard, osteotomy is proper, and, in fact, is the only means we have of correcting the deformity. But if the bones have not become hard and unyielding, the correction of the deformity by means of proper apparatus is about the easiest and simplest problem that presents itself to the orthopedist. Why we should wait for a year or two in order to perform an operation, when simple mechanical means will accomplish the same purpose without pain or danger, I confess I cannot very clearly see. Neither is the osteotomy devoid of all danger, though the per cent. of good results is very large; but I wish to be understood as appreciating the great value of the operation, and only question the wisdom of its employment in every case of curved limbs.

FRIDAY, JUNE 25TH—THIRD DAY—MORNING SESSION.

DR. J. MORRISON RAY, of Louisville, made the

REPORT ON OTOLOGY.

He referred to the rapid advance made in recent years in the knowledge of ear diseases. During the past year numerous valuable additions to the literature of this important branch of medicine have been made. One of the most noteworthy of these is a revival of the operation of multiple punctures of the membrana tympani in the treatment of certain cases of persistent catarrhal deafness. He said that when this operation was first introduced the profession was not in a position to discriminate between the proper and the improper cases, thus the method fell into disrepute. But since the correct interpretation of the tuning-fork test has been made, the cases that are apt to be benefited by this operation are more intelligently picked out. He, however, agreed with the opinion expressed by Schwartz and Von Tröltsch, that among the many favorable results none can be said to give sufficient evidence of its real value unless the patient has remained for a long time under observation after the operation. The modifying influence of syphilis on ear diseases, and the importance of its recognition when possible, was spoken of, and a case to the point cited. He agreed with Bomeray that malarial ear diseases do not exist, but that the malarial poison often exerts an influence on the course of ear diseases. The importance of a recognition of disease of the nose and naso-pharynx in cases of aural trouble was emphasized. The report of Bezold on the examination of the ears of school children was noted and attention drawn to the following statement: "My statistics show that the mental development of the individual suffers a limitation corresponding to the degree that his hearing power is diminished." Of the new drugs, he said, cocaine had not been as great a boon to sufferers from aural diseases as to those with eye troubles. The peroxide of hydrogen was spoken of in high terms, and it was claimed to be one of the best agents in the treatment of suppurating ears. Iodol was extolled, and was said to act promptly in stopping the discharge.

DR. ALLEN KELCH, of Louisville, read a paper on

THE CAUSE OF REGULAR ASTIGMATISM.

After calling attention to the coarse anatomy of the refracting media, and showing that three out of the four of them can be changed in form by reason of the absence of muscular fibre in them, in a passive manner only, he called attention to the fact that the faculty of accommodation resides in the changes of form, either active or passive, of the crystalline lens; that this being accepted as a fact, it must at once be admitted that regular astigmatism, as it is constantly met, cannot reside in the crystalline lens, for the reason that regular astigmatism is a constant, invariable quantity of defect of refraction, capable of measurement and correction by one unvarying, unchangeable lens; whereas, if it resided in the crystalline lens, it must and it could not do otherwise than vary with every varying degree of accommodation exercised. By the process of exclusion the aqueous and vitreous humors were incapable of being the seat of regular astigmatism, leaving only the cornea to be considered.

He showed how this medium, by reason of its projection and its position, must be attended in form by the pressure and the action of the eyelids in this, that it is compressed in the vertical meridian while it is lengthened in the horizontal, correspondingly increasing its refracting power in the vertical and decreasing its power in the horizontal. This being true, it must follow, as a natural consequence, that astigmatism, requiring a positive cylinder for its correction, must have that cylinder so placed as to increase the refraction in the horizontal meridian, inasmuch as the horizontal indicates the direction in which the cornea exerts the least refracting power. In order to add to the refraction in this meridian it is, therefore, necessary to place a positive cylinder in the vertical position.

Does large experience in the correction of regular astigmatism indicate this to be true? Experience follows the channel indicated by this theory most admirably, as he then proceeded to show.

In a recorded experience of 512 consecutive cases of astigmatism, occurring in the practice of Dr. Dudley S. Reynolds, who kindly permitted him to copy his notes, he found that in 448 cases, occurring in the right eye, there was required for correction, either alone or in combination with a spherical glass, a positive cylinder in the vertical meridian in 340. By a moment's reflection it will be seen that those cases requiring a negative cylinder in the horizontal meridian differ from the foregoing in degree only, and not in kind, and of these there were 37, making a total of 377.

In the left eye astigmatism existed in 452 cases, and required the positive cylinder in the vertical position in 337, and the negative, in the horizontal meridian, in 37, making a total of 374.

Of the 66 cases requiring correction in other meridians in the right eye, 23 required correction in meridians approaching within 10° of the vertical or the horizontal, which cases add their force to this theory, and swell the whole number to 400 cases out of 443 in the right eye. In the left eye those approximating within 10° numbered 32, making a total of 406 in the left out of 452.

This yields, sustaining this theory, 90 per cent. in the right eye, and 89.82 per cent. in the left eye.

The nature of the refracting media shows that regular astigmatism can exist only in the cornea, and the uniformity with which it here exists in a single direction, conforming exactly to what might be expected to be produced by the pressure of the lids, leads at once to that as the operating force in its causation.

He therefore derived the following conclusions:

(*a*) Regular astigmatism is due to changes of the spherical form of the cornea.

(*b*) The cornea has its contour altered by the pressure of the lids, and in this pressure we find the cause of regular astigmatism.

A paper was read by DR. WM. CHEATHAM, of Louisville, entitled

NASO- AND NASO-PHARYNGEAL REFLEXES.

The paper dwelt principally upon hay fever. Dr. Cheatham uses electrolysis in reducing nasal hypertro-

phies. He claims that it is as rapid and efficacious, and very much less dangerous, than the galvano-cautery or the acids. The after-effect is much more satisfactory. It leaves no cicatrix but at the point of the entrance of the needles. He uses cocaine to differentiate between true hypertrophy and engorgement. He locates sensitive areas in some cases in the larynx, pharynx, and conjunctiva. He also referred to the frequency of trigeminal cough and its proper management. He divided the causes of hay fever into: 1, External irritation; 2, predisposition; 3, vulnerable or sensible area. Especial attention was paid to the latter. He recommended to find this point and destroy it. He dwelt at length on the nerve-supply of the nose.

Dr. J. A. Stucky, of Lexington, made the report on

RHINOLOGY,

which was the first report on this subject made the Society.

The report was discussed by Dr. J. M. Thompson, of Richmond.

Dr. Edward Von Donhoff, of Louisville, read a paper entitled

CLINICAL DATA WITH REFERENCE TO A NEW METHOD IN THE TREATMENT OF FRACTURES.

Dr. Samuel E. Woody, of Louisville, read a paper on

THE REMOVAL OF HAIR BY ELECTROLYSIS.

On motion of Dr. S. Reynolds, of Louisville, the salary of the Permanent Secretary was raised from $50 to $100 per annum.

On motion, the thanks of the Society were tendered the President, the Committee of Arrangements, the citizens of Winchester, and the railroad companies.

The social programme consisted of a hop on Wednesday evening, and a banquet on Thursday evening, both very enjoyable. Kentucky can always be relied upon to do her share of hospitality.

The attendance reached 150.

Adjourned, to meet at Paducah on the third Wednesday in June, 1887.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 4, 1886.

F. P. Kinnicutt, M.D., President *pro tem.*

Dr. George L. Peabody read a paper (see p. 65), in which he reported cases of

ENDARTERITIS OBLITERANS,

accompanied by microscopic sections.

Dr. Sexton asked Dr. Peabody if he obtained any satisfactory results from the use of very considerable doses of iodide of potassium.

Dr. Peabody said that it was difficult to say whether *post hoc* was necessarily *propter hoc*, but in the case in which the patient recovered, recovery followed the use of iodide of potassium. When the lesion was syphilitic, he would suppose that iodide of potassium was indicated as much as in any other form of cerebral syphilis.

Dr. E. G. Loring thought that one of the chief points of interest in Dr. Peabody's paper was the elucidation of the fact that endarteritis may exist independent of syphilis. He was under the impression that this condition was seen in the eye very often, that there the endarteritis can be followed through years and the gradual obliteration of the vessel traced, and that finally the diagnosis can be confirmed by microscopical examination.

This disease occurs in young children, apparently as a regular inflammation which reduces the lumen of the vessel by some substance which is not atheromatous in the strict sense of the term, because the vessels of the eye are too small to be the seat of atheroma; but the material is so transparent as not to interfere with the appearance of the vessel, and there is apparently no change, except that the size is reduced and the walls are abnormally thick. These changes can be traced until, finally, portions are seen in which the lumen has been absolutely obliterated. In other cases there is a more active inflammation, and the arteries are changed into white cords, which can be distinctly made out as the result of endarteritis and periarteritis.

Dr. Loring was also much interested in the rapid recovery which sometimes takes place in cases with the symptoms which Dr. Peabody had related, and he would ask the doctor what, in his opinion, the exact lesion was that gave rise to the symptoms?

Dr. Peabody said that the explanation which seemed to him to be plausible, although purely theoretical, was, that in any vessel in which the lumen was already considerably encroached upon, there took place a spasmodic contraction of the muscle-cells in the walls of longer or shorter duration, and when this was relieved the blood again flowed to the parts to which the vessel was distributed.

Dr. Loring said that there were several cases on record in which spasmodic contraction of the arteries in the eye occurred, so that the vessels looked like mere threads. Graefe had reported a case on which he was about to operate when vision suddenly returned, showing that the condition must have been one of spasm simply. He had seen a case in which this would take place eight or ten times a day, and it was so distinct that the patient would watch and notice the blindness come on, and then observe it unwind and go again. Finally the eye went out altogether, and on examination he then found acute œdema of the vessel, which finally cleared up, when the endarteritis could be made out with slight hemorrhages, which were ultimately absorbed, and at last no vessels were left, neither veins nor arteries. He therefore thought that spasm of the small vessels would account for the sudden exhibition of the symptoms and their sudden disappearance.

Dr. Amidon asked concerning the condition of the heart in Dr. Peabody's cases.

Dr. Peabody said that it was normal, except in the first case, in which there was found very slight hypertrophy of the left ventricle. In that case also there was thinning of the cortices of the kidneys, and he regarded the hypertrophy of the heart as compensatory to the changes in the kidneys.

Dr. Amidon said that the reason he asked the question was, because it seemed to him that transitory aphasia and paralysis which occurred in syphilitics depended very much upon the condition of the heart. He thought that the symptoms could be better explained on the supposition that transitory weakening of the heart occurred, and lack of force sufficient to send the blood to the nerve-centres, than on the supposition that spasm of the arterial wall took place. Moreover, when the *intima* was so much hypertrophied, as it was often almost nodular, spasm of the *media* would perhaps be less likely to close the vessel than a weakened heart would be incapable of forcing sufficient blood through the narrowed lumen to supply the brain-substance. However, he did not wish to substitute one explanation for the other, but preferred rather to divide the cause of the disturbance between the two conditions.

Dr. Kinnicutt thought that Dr. Amidon's suggestion was rather contradicted by what occurred in certain patients suffering from renal disease, when the hypertrophied heart was doing its full work apparently, and yet the same train of symptoms were occasionally seen, and could hardly be explained except on the supposition of the occurrence of spasm of the blood-vessels. To be sure, there was a diseased condition of the blood-vessels, but the symptoms were more in harmony with the theory of spasm than with that of transient weakening of the heart.

The assumption of arterial spasm was also in harmony with the use of therapeutical measures which directly relieved the arterial spasm. Still the suggestion made by Dr. Amidon was worthy of full consideration.

DR. AMIDON asked if nitrite of amyl had been used in this condition.

DR. LORING remarked that it had been used by Dr. Noyes in a case with wonderful effect, as it would clear up the blindness almost instantly. However, the weakened heart doubtless exerted an important influence.

DR. A. B. BALL then read a paper, published in a previous issue, entitled

TWO CASES OF MYXŒDEMA, WITH REMARKS ON THE PATHOLOGY OF THE DISEASE.

DR. R. W. AMIDON said that he had been very much interested in Dr. Ball's paper, especially as he had the opportunity to see the first male case recorded, at Charcot's clinic in 1880, when Charcot told him that he had noticed the disease twelve years before that date, but unfortunately had never published anything concerning it. The patient was a male, aged fifty-seven, whose symptoms commenced in 1873, and consisted of swelling of the face, slight swelling of the extremities, with loss of appetite, etc. In 1878 Gumbold, his assistant, very carefully studied the case, and at that time the patient had the peculiar waxy facies, swollen tongue, eyes half closed, slow speech, husky voice, lips everted, teeth had all fallen out, but little hair remained upon the body, skin rough and scaly, mental condition slow, and progressive diminution of all the forces, with an apathetic condition, pain in the lumbar region, very sensitive to cold, etc. He improved on a milk diet, and it is not yet absolutely sure that it is a case of myxœdema, because the patient is still living. The fact, however, that he did improve is not evidence that it is not a case of myxœdema.

The experiments of Horseley were interesting with reference to the etiological features of the disease, as the group of symptoms produced by extirpation of the thyroid in animals were very much like those in the reported cases of myxœdema, and reminded him very much of some cases of paralysis agitans without tremor, also described by Charcot; but in these cases the patients complain of sensation of heat, and there is an abnormal temperature.

As to the primary etiological condition, Dr. Amidon was inclined to agree with Dr. Ball that it is in the thyroid gland, and especially because recently he had a case of perfectly typical sympathetic paralysis of one side, with atrophied thyroid, but no myxœdematous symptoms whatever.

DR. LORING said, with regard to the condition of the arteries of the eye in the cases examined with the ophthalmoscope, that it might be there was deposit there, and it might also be that the reduction in size was not real, but was apparent on account of the dilatation of the veins. He had seen one case of myxœdema, that of a woman, in which he could recognize distinctly a peculiar ophthalmoscopic appearance, consisting of a moderate degree of neuro-retinitis, with much enlarged veins, and but slightly reduced arteries. In the case reported by Dr. Wadsworth there was an atrophied optic disk, and in the seven cases reported by Dr. Little there were no changes in the arteries.

DR. C. L. DANA did not see how we could escape from the conclusion reached by Dr. Ball, although it was difficult to understand how so small a body as the thyroid could exert such an influence on the nutrition of the body.

Ever since he read the experiments made in connection with this affection, he had endeavored to ascertain whether or not there was any disturbance of the thyroid in cases of organic and functional diseases of the nervous system. In cases of chorea it was not infrequent to find the thyroid enlarged—in five to ten per cent. of the cases there was a marked enlargement—which disappeared when the chorea was recovered from. He thought that he had also detected change in the size of the gland in several cases of insanity; in some cases enlarged, and in some diminished, in size. He believed that the subject was worthy of investigation.

DR. G. A. PETERS said that the histories of Dr. Ball's cases brought vividly to his mind a case which was under his observation several years ago, but at which time he did not know the nature of the disease.

DR. KINNICUTT referred to a case which he saw quite frequently for many years without recognizing it. With regard to the thyroid, it was not enlarged, and he had thought that it was either normal or slightly reduced in size. The patient still enjoys life fairly well, and is in fairly good general health, and her condition has not changed apparently for five years.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HOSPITAL SUNDAY—THE NEEDS OF THE HOSPITALS AND NEW MODES OF MEETING THEM—CLINICAL FEES—PAYING PATIENTS—THE LATE MR. ROYES BELL—THE MEDICAL BILL—THE HAMILTON ASSOCIATION FOR PROVIDING TRAINED MALE NURSES.

LONDON, June 28, 1886.

YESTERDAY was Hospital Sunday, and collections for the medical institutions of the metropolis were accordingly made in most of the leading churches and chapels of all denominations. This year an innovation is to be made, for not only the religious, but the play-going public, are to be persuaded into donating. A number of the collecting-boxes have been affixed in the theatres and other places of amusement. The "mechanical beggar" in the Colonial and Indian Exhibition may be expected to produce a good harvest. This is a collecting-box with a little oscillating ticket attached to it, bearing a request to give. On dropping a penny in, a little plate rises up with "Thank you" inscribed on it. It is the invention of a medical man. These—and all other means of extracting money from those who have any to spare—are all sadly needed, for truly the hospitals of London are in a poor plight. Forty thousand pounds are needed this year to make good the deficit of the hospitals and dispensaries of London. It is now some years since an entire block of St. Thomas' Hospital was, under the name of St. Thomas' Home, appropriated for the use of paying patients. A year or two ago Guy's Hospital was driven to a similar course, and the announcement was made that paying patients would be received at a charge of a guinea a week, this being but half the amount charged in St. Thomas' Home. It was intimated that the authorities of Guy's Hospital were obliged to adopt this method of adding to their finances, in consequence of the depreciation in the value of land, which had caused a serious diminution in the income of the hospital. Guy's Hospital has a magnificent endowment, but it is largely vested in landed property. Considering the impecunious condition of so many of the large general hospitals, it really seems a fair question whether it would not be desirable to appropriate for the hospital funds the large sums paid by students for attending hospital practice. At present this is nearly all divided among the physicians and surgeons, as fees for teaching. A physician or surgeon attached to a large hospital, therefore, although he receives no direct remuneration from the hospital for his services, gets a very handsome equivalent in the form of students' fees. For these he is supposed to give a *quid pro quo* in the shape of bedside teaching, but the quantity and quality of the latter is by no means always proportionate to the amount

paid for it. The instruction given varies greatly at different hospitals, and with different teachers. In some cases it is very excellent, while in others it is but meagre and indifferent. Most of the physicians and surgeons to the in-patients of our large hospitals have reached an age and attained a position such that they do not really need the fees they receive for hospital teaching. Their juniors, in the out-patient rooms, be it remembered, get no fees for the teaching they give there. The clinical material is, of course, not so valuable as that in the wards, but it has a value of its own, and much valuable instruction is often given by the aid of it. The work is, at any rate, as hard as that of the wards, and those who do it may be presumed to need remuneration more than their seniors.

One device, which has been adopted very largely of late years, is to make the patients pay. I have mentioned above the system of receiving paying in-patients. This is now in force in a large number of the smaller hospitals. At many institutions, though, out-patients are also required to contribute, and in many cases do to a very large amount annually. This method of raising money for hospitals and dispensaries was formerly much decried, but at present, whether right or wrong, it is a well-established procedure. Naturally, under such circumstances, many patients of a better class betake themselves to a hospital or dispensary when they find that, by making a small weekly payment, they can be relieved from the trouble and worry of obtaining a governor's letter of recommendation. Not without some truth does the general practitioner complain that the hospitals rob him of his patients. The special hospitals have displayed the greatest ingenuity in extracting payments from patients. In some of them the pay plan has been erected into a veritable system, and a sliding-scale constructed, according to which a patient is required to pay a sum varying from one to five shillings a week, according to his or her means. In this line of business the Throat Hospital, Golden Square, is *facile princeps*, for it has carried the paying system to such an extent that it is nearly self-supporting, and almost independent of donations and subscriptions. Indeed, I believe the last balance-sheet actually shows a profit on the working expenses.

Yet another hospital surgeon has passed away almost before reaching middle age. I refer to Mr. Royes Bell, Surgeon to King's College Hospital, who died at the early age of forty-four. Mr. Royes Bell was born in Australia, but came to Europe early in life, and was educated at King's College. In 1870 he became a member of the surgical staff of King's College Hospital. For many years he assisted the late Sir William Ferguson very largely in his private practice. Mr. Bell furnishes yet another example of long years of patient toil in out-patient practice, ending in death before the well-earned reward of so many years' work can be reached.

Contrary to expectation the Medical Bill has passed. It will not very materially alter the present position of practitioners in this country. Its most noteworthy features are those permitting the registration of foreign degrees (the holders being already registered in virtue of the possession of a British qualification), and of diplomas in sanitary science.

The first annual meeting of the Hamilton Association for Providing Trained Male Nurses was held on Wednesday last. Sir Thomas Crawford, K.C.B., Director-General of the Army Medical Department, presided and moved the adoption of the report. This was seconded by Sir Joseph Fayrer, and carried unanimously. Several gentlemen afterward addressed the meeting and spoke in favor of the movement. The report showed that during the past year satisfactory progress had been made. The male nurses supplied by the Association had given satisfaction in nearly every case, not only to their patients but also to the medical men under whom they had worked. The position of the Association appears to be unique. Although there are numerous institutions in London for supplying female nurses, in no one, although many profess to supply male attendants, is there a department for male nurses who have been through a systematic course of hospital training. Only trained male nurses are employed under the Hamilton Association. It should be added that the Association is not established as a commercial undertaking, or for the purpose of profit or gain.

OUR PARIS LETTER.

(From our Special Correspondent.)

TUBERCULOSIS IN CHILDREN AND CONGENITAL TUBERCULOSIS—"THE TOLERANCE OF THE ORGANISM"—A LARGE BILIARY CALCULUS—THE MICROBE OF RABIES.

PARIS, July 2, 1886.

As a corollary to your editorial note in THE RECORD of June 19th, anent tuberculosis in children and the question of congenital tuberculosis, I may here give a summary of a note read by Dr. Landouzy at the Medical Society of Hospitals on the same subject. The author's conclusions are: That tuberculosis in infancy—that is, from birth to two years of age—is more frequent than it is said to be. It does not often present any other localization than a broncho-pneumonia. The latter is sometimes simple in appearance, and can be proved tuberculous only by bacteriological examination; at other times, on the contrary, it coexists with other lesions manifestly tuberculous. Tuberculosis is transmitted to the new-born infant either by mediate contagion or by heredity. Hereditary tuberculosis is transmitted by the grain. The bacillary proof of heredo-tuberculosis has been given by Johne. This question of the heredity of the grain shows how difficult is the prophylaxy of infantile tuberculosis, and the author asks, if much could be done against tuberculosis by contagion, what can be done against infantile heredo-tuberculosis?

At the same meeting of the Medical Society, Dr. Robin communicated a curious example of what he termed the "tolerance of the organism," or the impunity with which a person can live even with grave lesions in the interior of the body. The subject was an old woman, seventy-nine years of age, who died in his ward at the hospital from the sequelæ of pneumonia. Dr. Robin stated that on different occasions he had treated the patient for slight attacks of bronchitis, but independent of these occasional attacks her life was passed without her ever having felt herself positively ill; nevertheless, at the post-mortem examination of her body, Dr. Robin found, in the first instance, a double aneurism of the abdominal aorta, which, however, was cured spontaneously. He then discovered considerable dilatation of all the biliary ducts, extra- and intra-hepatic, which were filled with calculi of different dimensions.

On the same occasion Dr. Legroux exhibited a voluminous biliary calculus, which was found in the dejections of a patient affected with hepatic colic. The stone measured 33 mm. in height and 22 mm. in breadth. Its composition presented nothing particular.

The *Semaine Médicale* has published a note from M. Rivolta, Professor at the Veterinary Institute of Pisa, in which the author gives an account of his researches on rabies, the microbe of which he believes he has discovered.[1] In adopting a special method of coloration he has succeeded in establishing the constant presence of a parasite in this malady. The following is the method adopted by the professor: After having allowed the spinal marrow, the medulla oblongata, and the other organs of animals which died from hydrophobia to harden in alcohol, he cuts them up into fine pieces, which he afterward puts into chloroform, where they are left for twenty-four hours, to rid them of the fat which they might

[1] The interest of the subject must be my excuse for reproducing it here, though but partially.

contain. He puts them back into alcohol, and then into a mixture composed of ten parts of an aqueous solution of caustic potash (ten per cent.), three parts of distilled water, and three parts of glycerine, where they are left five or six hours, or even more. This done, the pieces are put into a solution of methylene blue, in which they are left for a few minutes, until they have been entirely tinted blue. After being washed with distilled water, they are placed on a plate of glass (object-glass), where they are allowed to dry slowly at a mild heat. The preparation is finally completed with Canadian balsam dissolved in chloroform. If, at this moment, the preparation is examined, it will present a diffuse coloration, but it is easy to obtain the coloration special only to bacteria by exposing, with precaution, the object-glass to the flame of a spirit-lamp to raise the balsam of Canada to the point of ebullition, and then allow it to cool. In acting thus the tissue becomes discolored, while the bacteria remain colored.

This operation of ebullition is repeated two or three times, until the bacteria appear of a beautiful blue on a ground nearly colorless. These bacteria, thus colored, are from 1.5 to 2 millimetres long, and 0.7 of a millimetre broad. Each bacterium appears to be formed by several round or oval granulations united together in chains. In some few cases they appear to be uniform, and to be formed of one single piece. They are found in very great numbers in the medulla oblongata. They are also numerous in the spinal marrow, but more rare in the cerebral hemispheres; they are also found in the epithelium of the parotid glands. They are rare in the spleen and in the kidneys, but numerous in the liver, where they lodge in the interior of the hepatic cells. Professor Rivolta mixed the half of the medulla oblongata of a rabic rabbit with distilled water which was previously sterilized, and he then filtered the whole through a filter of porcelain. With the liquid thus obtained he inoculated three rabbits after having trephined them. At the same time, and by the same procedure, he inoculated two other rabbits with the liquid remaining on the filter. These latter animals died of rabies at the end of thirteen days, whereas the three first did not manifest any rabic symptom four months after the inoculation.

At a recent meeting of the Academy of Sciences, Professor Brown-Séquard was elected member in the Section of Medicine and Surgery in the room of Professor Vulpian, appointed Perpetual Secretary.

At the last meeting of the Academy of Medicine, Sir James Paget, the eminent English surgeon, was elected member in the Section of Foreign Associates.

Mademoiselle Ribard, Doctor of Medicine of the Faculty of Paris, who accompanied Paul Bert to Tonquin, died of dysentery soon after her arrival in that country.

THE TREATMENT OF FEVER BY COLD BATHS, ACCORDING TO THE PROPHET.—It seems that cold bathing for the reduction of high temperature is not a novelty by any means. Dr. Bertherand, writing in the *Gazette Médicale de l'Algérie*, translates portions of an Arabic work which prove that Mohammed was an advocate of this therapeutic measure. Asmâ, in a visit to a friend, found her sick with a fever and poured water over her, saying: "The prophet of God has commanded this, for the fever must be cooled as it is a fire from hell." When the prophet himself had a fever he had himself sprinkled with cool water three nights, just before the dawn, for he said that fever was "a whiff from the winds of hell, and must be overcome by means of cool water." The writer of the work gives directions for cooling the water still further, if necessary, by the admixture of ice or snow, and he says also, that it is sometimes of advantage to add vinegar to it.

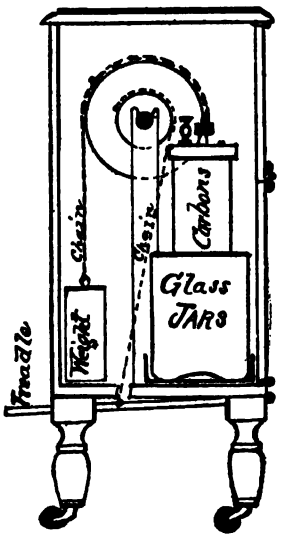
"THE SKUNK" is the title of a very strong article recently read before the Medical Association of Alabama.

New Instruments.

AN IMPROVED FORM OF GALVANO-CAUTERY BATTERY WITH DIFFERENT FORMS OF POINTS.[1]

BY BEVERLEY ROBINSON, M.D.,
NEW YORK.

To all specialists and workers in the field of nasal and throat diseases the galvano-cautery battery is at times an invaluable instrument. Hitherto it has not been used as often as it is desirable on account of the trouble of filling and emptying the cells, and the risk of spilling the fluid upon some article of value.



This statement is especially true of minor operations, or those in which some other means would answer fairly well. In making use of the improved form of galvano-cautery battery the objections urged above are reduced almost to a minimum. Besides, the battery can be kept in the office ready for any occasion when it is required. The fluid will rarely need changing, and when it is necessary, may be done with little annoyance.

I have been using one of these batteries during the past two months, and have found it a great convenience in office work. It seems to me equally well adapted to hospital work. Its cost is moderate, being $35.

As compared with a good storage battery with gravity cells it is two-thirds less expensive, and, I am inclined to believe, for cautery work alone will be found nearly as satisfactory.

In connection with the battery I desire to show you a number of cautery points and cups that I have found very serviceable in the treatment of different forms of nasal catarrh and hypertrophy of the turbinated bodies.

The following is the description of the battery given me by the manufacturer, Mr. H. E. Stammers:

"The cabinet galvano-cautery battery consists of a case of polished walnut 13×15 inches, 31 inches high, outside measurement. The top of the case opens on hinges. A door is placed in the back, as shown in the drawing, and two trays for holding the cords and electrodes, are set in the upper portion of the case. Two glass cells, 6×8 inches, are placed in a lead tray; three carbon and two zinc plates, 4×6 inches, are in each cell, connected with a counter balance weight by means of a chain which passes over a grooved wheel. Another chain is connected with a smaller wheel on the same shaft, and is attached to a treadle which, by depressing with the foot, lowers the elements into the fluid to any required depth.

[1] Shown to the members of the Practitioners' Society at a Stated Meeting held March 5, 1886.

A drop ratchet holds the treadle in any suitable position, thus regulating the strength of the current to various sizes of electrodes. When the drop ratchet is released, the weight lifts the elements from the fluid and holds them suspended, ready for instant use. The ordinary bi-chromate of potash battery fluid is used (half a gallon in each cell). One ounce of bi-sulphate of mercury should be added to each half-gallon of fluid after it is put in the cells, as it serves to keep the zincs amalgamated, and prevents a brown deposit from forming on them. If the fluid is in use several months, plain water may be occasionally added to it, to replace what is lost by evaporation. No corrosive fumes, however, rise from the fluid, unless a quantity of the solution is allowed to evaporate rapidly. The battery being provided with castors and handles, can be rolled, or lifted about, readily, and as the cells are only half filled, there is little danger of the fluid slopping over. The parts of the battery are constructed so that they can be taken apart and replaced in a few moments. The length of time the fluid lasts depends on the size of the electrodes employed and the length of time they are in use. For ordinary electrodes, when they are used about five minutes at a time, the fluid should last during twelve operations; one minute at a time, sixty operations—or what is equal about to one hour's work. For small electrodes the fluid should last during five or six hours' work, the explanation of this great difference in time being that a light *current* will still heat a small electrode even though it fails to heat a large one. Besides, the elements need not be lowered so deep into the fluid to heat the small electrodes. The treadle may be used as an *agitator* of the fluid whenever the current becomes too feeble to heat the electrodes properly, and will often serve as a valuable adjunct for this purpose."

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 4 to July 10, 1886.

PAGE, CHARLES, Lieutenant-Colonel and Surgeon. Leave of absence further extended one month. S. O. 156, A. G. O., July 8, 1886.

WATERS, WILLIAM E., Major and Surgeon. Ordered for duty as Post-Surgeon, Fort Spokane, Washington Territory. S. O. 112, Department of Colorado, July 2, 1886.

HOW TURKISH WOMEN PREVENT CONCEPTION.—One would suppose that the offspring at the harem would be large with such facilities at command, but such is not the case, the main reason being the systematic prevention of conception; and when pregnancy has occurred abortions are produced, of course not in every case, but in such cases as the master of the harem directs. Turkish women generally incline largely to these practices; consequently, the citizens of the empire are not increasing as they would under other conditions and circumstances. For preventing conception they use a piece of "bitter wood" an inch in diameter and about eight inches long. After the completion of the sexual act they proceed with this cylinder of wood introduced into the cavity of the vagina to mutilate the parts until free hemorrhage occurs, when they consider themselves safe.—Constantinople Cor. *Iowa Medical Reporter.*

MORALITY OF TURKISH WOMEN.—The Turkish women are, as a rule, true to the Turk. There is not a house of prostitution conducted by Mahometans in Constantinople. The English and other European representatives supply these immoral accommodations.—Constantinople Cor. *Iowa Medical Reporter.*

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 10, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 10, 1886.....	0	7	25	5	69	63	2	0
Deaths.								
July 10, 1886.....	0	2	5	5	14	40	0	0

THE TONGUE IN DISEASE.—A white-coated tongue indicates febrile disturbance. A brown, moist tongue indicates disordered digestion or over-loaded primæ viæ. A brown, dry tongue indicates depressed vitality, as in typhoid conditions and blood-poisoning. A red, moist tongue indicates debility, as from exhausting discharges. A red, dry tongue indicates pyrexia, or any inflammatory fever. A "strawberry" tongue, with prominent papillæ, indicates scarlet fever or rötheln.—*Technics*, March 25, 1886.

THE MICROBE OF SYPHILIS.—It is said (*La Enciclopedia*) that Alvarez has found a micro-organism in the normal secretion of the external genitals which is apparently identical, in form and characteristics, with Lustgarten's bacillus, supposed by him to be the specific microbe of syphilis.

THE DISCOVERER OF COCAINE.—Signor Torretti, professor of chemistry and pharmacology in the University of La Paz, Bolivia, has written a letter to the journal *El Ferro Carril* of Santiago, in which he maintains that cocaine was isolated for the first time in 1857, in the laboratory of the Botica y Drogueria Boliviana, by Sr. Pizzi, following the suggestion of the Austrian traveller Tschudy. He says that the manuscripts of Pizzi remain to attest the fact, and Herr Tschudy and Dr. Aquiles Reid, of Valparaiso, are still living and can add their testimony to support this claim.

OVARIOTOMY IN BARCELONA.—Dr. Miguel A. Fargas has published the histories of the first series of ten ovariotomies performed by him in Barcelona during the three years preceding July, 1885. The operations were performed as far as possible under antiseptic precautions. The first nine patients recovered, but death resulted in the tenth instance.

DETROIT INVECTIVE. — "Infinitesimal shrew-mouse squeaklet of a mediker," is one Detroit physician's characterization of another in the public prints. The language is unique and vigorous. We have endeavored to picture an individual to which it would literally apply, but having completely failed, conclude that it is merely a sort of figurative expression, calculated to convey the impression that the party of the first part cherishes none of that love for the party of the second part which the Scriptures enjoin.—*Medical Age.*

DEATH FROM DENTAL CARIES.—Dr. Poncet reports the case of a man who had an extensive gingivitis following caries of the teeth. He was admitted to hospital presenting the symptoms of septic poisoning, and died at the end of a few hours. At the autopsy numerous small abscesses were found in the mastoid process, and there were other evidences of septicæmia present. The origin of the disease was referred to the carious process existing in the teeth.

A SIGN OF DEATH.—Dr. Lesenne, of Amiens, says that one can determine with certainty whether a person is dead or not by thrusting a pin into the skin. In a cadaver the hole made by the pin will remain patent, just as if the pin had been stuck into a piece of leather, but if the person be alive the hole will immediately close, leaving scarcely a sign to show where the pin had entered the skin.

THE PERSIAN MODE OF TREATING HERNIA.—Dr. J. P. Cochran sends to the *Medical Press of Western New York*, a description of the Persian radical cure for hernia. Dr. C. has seen three men who were perfectly cured. The method is described as follows: "We will take for example an oblique inguinal hernia. The intestine being reduced, the borders of the external abdominal ring are traced with ink, as a guide in the application of the hot iron. A thick ring of dough and somewhat larger in diameter is then placed around the part to be cauterized, to protect the adjacent tissues. The instrument used consists of a rough iron ring, one-fourth of an inch in breadth, and sufficiently large in diameter to include about one-eighth of an inch of the borders of the abdominal ring. It has an upright piece surrounded by wood for the handle; or it may be a solid disk, or else a ring with cross-pins in it. The patient is now made 'dead drunk' with arrack; or else, and especially if it be a child, is held perfectly still by a number of strong assistants. The iron is brougnt to a dull-red heat, and with all the neighbors—men, women, and children—who can crowd into the room where the struggling patient lies on the floor, the operation begins. The surgeon holds the instrument an inch above or over the part and as the surface is scorched and the iron has cooled somewhat it is placed within the ring of dough and directly upon the breach in the abdominal walls. After it ceases to burn the flesh it is again heated and the operation is repeated. The after-treatment consists in healing the ugly burn gradually."

ARE WE STILL SO DIRTY?—Dr. George C. Wellner, of Wabash, Minn., writes: "I beg you kindly to permit me a few words of reply to your editorial, 'A Warning to the Careless,' of the issue of May 1st. You say: 'The medical profession, or rather the community at large, has cause to congratulate itself that it is living under the new dispensation of the gospel of cleanliness, and not dying from poison unconsciously administered by a careless or dirty medical attendant!' I believe your assumption is premature. We may indeed assert and reassert the gospel of cleanliness, but it is as yet idle to regard the community at large as living under the new dispensation, whether of Listerism or simple surgical cleanliness. The truth is, that a large proportion of the community at large dies now, as formerly, from poison, with this difference—that it is now *consciously* administered by a careless or dirty attendant. I say consciously administered, for since the advent of Listerism the medical profession has been well-nigh rationalized to death with the one or the other, Listerism or cleanliness, and it certainly cannot be possible that the efficacy of soap and water, as applied for the purposes of surgical cleanliness, must needs yet be persistently lauded and demonstrated to any number of the profession in America. We have now quite as much light already as we can manage well, and what we pray for now is more disposition to apply the facts we have. I mean that having embraced the gospel of either Listerism or cleanliness, the medical profession at large can have no excuse for withholding its dispensation. But, as yet, the great bulk of cases in which one or the other method is applicable, as well as most of the instruments in daily use, including the hands, do not receive even the odor of carbolic acid or the touch of soap. For example, the clinical thermometer is commonly removed from the patient's mouth to its case *uncleansed*. And it is fact, not fiction, that the pocket-case instruments—eye, ear, mouth, and nasal specula, tongue-depressor, catheters, and, indeed, the entire armamentary of minor instruments—are commonly not surgically cleansed. I do not wish to be understood as denying the existence of the new dispensation of the gospel of cleanliness. There is, indeed, a new dispensation, but it is, with a few exceptions, altogether quite within that comparatively narrow sphere of surgery and medical practice in which rivalry and emulation prevail. Without this sphere I believe we still partake largely of the old dispensation."

THE FREQUENCY OF RABIES IN PARIS.—In 1885, there were 518 rabid animals killed in Paris and the Department of the Seine. Nineteen persons died of rabies.

MINERAL WATERS AND THEIR USES.—In an excellent article upon this subject, by Dr. Titus Munson Coan, in *The Journal of Reconstructives*, the following concise statements are given regarding the properties of the various mineral waters: For anæmia the reconstructive and tonic waters are needed, in conjunction with such diet as will restore the lacking elements of the blood. Beef peptonoids for the anæmia of dyspepsia; gluten bread and whole wheat bread for that of diabetes; cod-liver oil and milk for that of the phthisical diathesis are indicated. The springs of Auvergne, and of Salins, Luxeuil, and Bussang in France; Franzenbad in Austria, and our own Columbian Spring at Saratoga, will bring relief or cure when used with these adjuvants. When chlorosis accompanies constitutional anæmia, the contrasted influences of Alpine resorts and sea-bathing are alike useful. For asthma and bronchitis: Mont-Dore, Royat, Ems, Aix-les-Bains, Virginia Red Sulphur Springs. For post-nasal catarrh: Aix, Mont-Dore; but energetic local treatment in addition is sometimes needed. For dysentery: Rockbridge Alum Springs, Bussang in the Vosges. For dysmenorrhœa: the saline, iron, and sulphur springs must be chosen among. For dyspepsia: Carlsbad, Vichy, Pougues, Bagnères de Bigorre, Kissingen, Hombourg, Salins, Hathorn Springs, Greenbrier White Sulphur, and many others, according to the symptoms. For gout: Vichy, Vals, Royat, Buffalo Lithia, Sharon Springs. For acid gravel, the most frequent form: Carlsbad, Ems, Neuenahr, Buffalo Lithia, Capon Springs, Gettysburg "Catalysine." For alkaline gravel: the calcic waters. Clysmic is one of the best, and it is also a very pleasant table water. For hysteria: Pyrmont, Schwalbach, Spa, Néris, Schooley's Mountain, Rawley Springs, Congress Spring. A patient of mine, a delicate woman, found great relief at Luxeuil, in Eastern France. For intermittent fever and malaria, the waters of the Massanetta Spring have a desirable reputation. For laryngitis or "clergyman's sore throat," choose among the sulphur waters rich in sodium, or the alkaline, with chloride of sodium. Eaux Bonnes, Ems, Obersazbrunnen, Neuenahr, Selters, Sharon Springs, are typical and excellent waters of these kinds. For engorged and fatty liver: Carlsbad, Marienbad, Tarasp; when nutrition is badly impaired, Kissingen, Hombourg, Salins. For articular rheumatism: Aix, Springs of the Pyrenees, Hercules Baths, Baden Baden, Wiesbaden, Ischl, Sharon, Richfield Springs. For muscular rheumatism: thermal springs, as Teplitz, Warmbrunnen, Gastein, Ragatz, Plombières, Lebanon Springs. For torpid scrofula: Salins, Kreuznach, Ischl, Kosen, Bourbonne-les-Bains, Rockbridge Alum, Greenbrier Springs. For irritable or "erethic" scrofula: La Bourboule, St. Nectaire, and other springs of Auvergne. For skin diseases: the sulphur and arsenical springs offer a vast field of choice, according to the character of the case. Uterine diseases are variously treated by the alkaline, muriated, or saline waters, and with brine baths or the ascending douche. They form a large contingent of the cases treated at mineral springs, both here and abroad.

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Original Articles.

THE IMPORTANCE OF AN EARLY DIAGNOSIS IN CASES OF GENERAL PARESIS.[1]

BY HALSEY L. WOOD, A.M., M.D.,

NEW YORK,

LATE ASSISTANT MEDICAL SUPERINTENDENT MICHIGAN ASYLUM FOR THE INSANE.

NOT many months since, there died in a neighboring city a distinguished actor, for years unapproached in the delineation of robust tragedy; upon whose lips thousands hung in admiration, and yielded their emotional nature to the sway of his own. A giant in his art, he toppled over, a mental and bodily wreck, at an age that should have witnessed the maturest expression of ripened genius.

But before he died—before, indeed, he had left that stage upon which his latest efforts all too surely presaged "the mighty tree thundering to its fall," he was permitted for weeks to keep up the melancholy travesty of his former genius; to riot in the excesses and indulge the extravagances peculiar to his disease, and to be permitted that liberty he could no longer govern, until he had reduced a noble physique to helpless decay; an exalted mind to empty fatuity; a considerable fortune to absolute penury; his wife and children to future charity.

A few days ago, there was admitted to Bloomingdale Asylum a prominent and successful dramatist, in the early stages of a progressively fatal disease. Early, but not in time to save from the wreck of a once sufficient competence the large sums squandered in the expansive and chimerical schemes bred by a diseased intelligence. His wife and family are in poverty, and he must be supported for the brief span left him by the benevolence of his former professional associates.

These are by no means rare cases. Similar ones might be multiplied by tens and by scores. The comfort and support of hundreds of wives and mothers, the accumulations of years, the studied economies of a lifetime, have been squandered in weeks in the delusional mania of which we speak.

My apology for the introduction of this subject before the Society is the comparative infrequence of such cases in the experience of the general practitioner, the importance of their early recognition, and the disastrous consequences of delay. It has been my fortune, in an asylum experience of more than seven years, to see many cases of general paresis. These were admitted in various stages of the disease, and in but three instances was the condition of the patient recognized prior to admission. This, I am well aware, indicates an extreme state of things, and argues an unfamiliarity with the subject only possible at a distance from medical centres. To see a sufficient number of cases to thoroughly familiarize one with the morbid manifestations, is sufficient, in most instances, to render the diagnosis prompt and certain.

To the French physicians belongs the credit of the earliest recognition of the disease, attention having been called to it in 1822 by Bayle. The first complete account was, however, given by Calmeil in 1826, and to him is frequently ascribed the merit of having been its discoverer.

[1] Read before the Harlem Medical Association, June 2, 1886.

Many names have been proposed for it. Of these the most important are: General paralysis of the insane, paralytic insanity, paralytic dementia, incomplete general paralysis, progressive general paralysis, and general paresis, or simply paresis. It is proper to protest, in this connection, against the use of the terms paralytic insanity, or paralytic dementia, to indicate this disease, as they are properly associated with the organic dementia resulting from gross cerebral lesions, as apoplexies, ramollissements, tumors, atrophies, and chronic degenerations of the brain, affecting the convolutions and their functions, either primarily or secondarily. They have nothing whatever to do with general paresis, their use only confuses the issue.

Of late the term general paresis has been commonly used, and although it may be urged that, in preferring it to general paralysis, we substitute for the old name one equally vague and unscientific, the custom, if not the wisdom, of modern times is in the usage, and we shall follow it in our subsequent reference to the disease.

General paresis is a distinct disease, physiologically, pathologically, and psychologically; as unique and separate from all other disease as is variola from scarlatina. I quote the following very satisfactory definition of general paresis from Dr. Clouston's "Clinical Lectures on Mental Disease":

"A disease of the cortical part of the brain, characterized by progression, by the combined presence of mental and motor symptoms; the former always including mental enfeeblement and mental facility, and often delusions of grandeur, and ideas of morbid expansion or self-satisfaction; the motor deficiencies always including a peculiar, defective articulation of words, and always passing through the stages of fibrillar convulsion, inco-ordination, paresis, and paralysis; the diseased process spreading to the whole of the nervous tissues of the body; being as yet incurable and fatal in a few years."

The victims of this disease are, for the most part, robust, middle-aged, active-minded men. It steadily progresses and rapidly destroys all that is human in the unfortunate subject, leaving him to exist for months together "an unconscious automaton."

It may be well to consider here the question often asked, whether general paresis can exist without mental disorder. Dr. G. H. Savage, editor of the *British Journal of Mental Science*, in his recent work on insanity and allied neuroses, asserts that he has seen several such cases in the wards of general hospitals; cases presenting all the physical symptoms, and to this extent undistinguishable. Griesinger, however, strongly dissents from this position, asserting that the cases are not similar, that they do not ultimately manifest the purely mental symptoms. Indeed, Dr. Savage acknowledges this issue to have occurred in very many of the cases referred to, the disease rapidly progressing to a fatal termination. A general impression as to the causation of general paresis, is that it depends upon *sexual excess*. Dr. Maudsley supports this view. Dr. Blandford writes: "I have held for some years the opinion, based altogether upon my observation of cases, that sexual excess has more to do with the causation of it than anything else." But the growing testimony of observers is in the direction of less positive assertion. The increasing number of cases in which this factor cannot reasonably be adduced as present, or as an important cause, demands a more guarded utterance. Undoubtedly sexual excess has much to do

with the causation of the disease, as does great alcoholic indulgence and other toxic influences; but it is chiefly in combination with other depressing and degenerating agencies that its force is recognized. It should be borne in mind that sexual excess is a common early symptom of the disease, and the effect should not be mistaken for the cause. The fact is, it is very difficult to establish the existence of sexual excess. Apart from the uncertain and unwilling testimony likely to be furnished, individuals differ greatly in susceptibility to the action of such a cause; excess for one being moderation for another. Syphilis is an active and undoubted cause in many cases, the extensive chronic degenerations peculiar to its course greatly predisposing to attack. But the cause or factor *most* commonly present, according to the experience of modern observers, is that of *anxiety, over-strain*, rather than overwork. The exhaustion consequent upon a prolonged struggle in the battle of life, with the odds always against one; the exhaustion, too, that comes to the successful toiler—successful in grasping the prize after a life of arduous struggle, to fall by the wayside a wreck! "Excessive mental excitement, and, in a still greater degree, emotional agitation," writes Griesinger, "appear to be important factors in its production" ("Mental Diseases," p. 401). Anxiety about business, sleeplessness, worry, loss of appetite, prepare the way for the sexual and alcoholic excesses that too often step in and give the finishing stroke.

"To sum up: general paresis arises, as a rule, from a combination of causes; the most direct being excesses of all kinds, whether sexual or alcoholic, which act more powerfully when associated with strain, worry, and anxiety. Traumatism affects some, as may also such diseases as syphilis," writes Dr. Savage.

General paresis is usually divided into three stages. Like everything else, it has a beginning and an end, and there is, of course, an intermediate period of varying duration. Roughly speaking, a period of incubation, a period of excitement, and a period of dementia. Blandford divides them into: 1, alteration; 2, alienation; 3, progressive paralysis and dementia. These are, however, quite inexact. Dr. Clouston classifies as follows: "The first stage is that of fibrillar tremblings and slight inco-ordination of the muscles of speech and facial expression, and of mental exaltation with excitement; the second, that of muscular inco-ordination and paresis with mental enfeeblement; and the third, that of advanced paresis, or no power of progression, almost inarticulate speech, and at last paralysis, with mental extinction" ("Mental Diseases," 1883, p. 354).

The first thing noticed by the friends of a general paretic is that an *alteration* has taken place in him. Before it is manifest that he has become insane, a change in habit or manner of life will be sure to attract attention. The nature and amount of this change will vary with the business, social position, education, etc., of the individual, but it will be noticeable as contradicting his previous character and habits. And it is an interesting fact that, in this progressive degeneration, it is the last and highest acquirements that fail first, so that the musician loses his power over his fingers, the seamstress can no longer sew, the *danseuse* forgets her steps, and the actor his part. The prudent man becomes suddenly prodigal; the cautious man, reckless; the modest, boastful; and the refined, coarse and obscene. And there will be an extravagance and silliness in all that is done that argues a peculiar want and mental defect. In the delusions of acute mania there is a certain reason in the unreason; for the acutely maniacal patient will often throw a certain air of probability about his claim by his urgent defence. But the general paretic does not argue about his delusions, and is rarely disturbed by contradiction. He advances rapidly from one notion to another, forgetting the one that dominated him yesterday in the brilliance of the one conceived to-day. Loss of memory for recent occurrences is a very noticeable symptom at this time, and is so marked as to explain much that he does or fails to do. He forgets appointments, payments, obligations. His notes go to protest, his business is in confusion from his lack of coherence and system. He gives opposing orders to his servants, and flies into a rage if they are not instantly executed. The purchase of useless articles, the sending of numerous letters and telegrams, and the accumulation of worthless trash are common symptoms. A patient of mine had expended $1,500 in the purchase of a barnful of wagon-jacks before his insanity was discovered. He is often destructive at this stage, tearing garments, books, etc., in shreds with the idea of an improved reconstruction. A general paretic alluded to by Clouston, tore his overcoat into strips, laying them upon the floor side by side. When remonstrated with, he replied, "I'll p-put it tog-g-ger ag-gain when I g-get to Jerush-lem—I've g-got a million coats there." His sleep is apt to be broken at this time. Some patients are so possessed by active delusions that they forget to go to bed. The appetite for food is often voracious, and the patient drinks excessively, forgetful of what he has already taken. But, in connection with these mental symptoms, there will also be observed peculiar motor disturbances. While the patient is giving utterance to his exalted delusions a defect in articulation, a slurring, slovenly enunciation is commonly noticed that is very characteristic. It suggests the speech of a man suffering from alcoholic intoxication, and these cases are not infrequently mistaken for such at this stage. Dr. Connolly describes it well in this wise: "There is in these patients, not a stammer; no letter or syllable is repeated, but a slight delay; a lingering, a quivering in the formation of the successive words or syllables, apparently from the want of a prompt nervous influence in the lips and tongue." In addition to the tremulousness and quivering of the lips, which at a later date extends in many cases to the facial muscles, there is a fibrillar tremor of the muscles of the tongue. The patient has little control over this organ. When asked to protrude it, a perceptible delay occurs before accommodation enables him to obey. The tongue is then shot forth convulsively, while it shivers, darting back and forth. Upon its surface are seen the fibrillar contractions of separate strands of muscle, quivering in well-defined lines. Irregularity of the pupils is a symptom present in a large proportion of cases. It is often transient, and may be present in the different stages throughout the disease. It is rarely permanent. Atrophy of the optic disks is a frequent symptom, but commonly occurs later. The first stage may last for several weeks. In the commencement of the second stage, the patient is often sulky, dull, and apathetic for a time, but exposed to attacks of sudden and violent excitement that commonly render his seclusion in an asylum a pressing necessity. To this condition there rapidly succeeds a mental exaltation, so characteristic as to be almost pathognomonic. Exalted delusions are common to several forms of mental alienation, but there is a preposterous absurdity about the claims of the general paretic that distinguishes them. Individuals suffering from acute mania, chronic mania, and monomania, will often claim to be kings and queens, but the general paretic will assert that he is God, the president, king, emperor, czar, duke, and marquis all at once, and if you suggest to his receptive mind other regal and princely titles, he will promptly appropriate them.

In addition to all this he has billions of millions of dollars, is to be married to-morrow, at Windsor Castle, to the Queen of England, who is to be but one of his hundred thousand wives, and that he has ordered all the steamboats and rail-cars in the world, his personal property, to transport spectators to the ceremony. A patient under my observation, seriously announced to me that he owned a reef of solid gold one hundred miles square, twenty leagues south of the Cape of Good Hope; that a million vessels manned by a billion men were, under his orders, engaged in removing this precious treasure and

carrying it to America, to be stored in his millions of billions of storehouses. He could, Midas-like, make gold by touching any baser thing, but, unlike Midas, could restrain the action of this talent at will. He was the strongest man in the world, had whipped all the noted pugilists, and could lift a ton of coal with his little finger. After the utterance of these boasts, it was by no means uncommon for him to beg a "chew of tobacco," and after describing how completely he had "laid out" John L. Sullivan, to ask assistance in reaching another part of the hall. General paretics accept and implicitly believe, as a rule, the delusions uttered by their fellow-patients. This is at variance with other forms of mental disease, for the contrary is generally true. Exceptions occur, however. Dr. Savage quotes the following conversation between two general paretics. "I am king of England," said one; the other, turning with a scornful laugh to me, said, "That man says he is king of England; I am God Almighty, and I don't know him." In the same way I have known a medical paretic recognize the disease in others by the very symptoms from which he was himself suffering. Anæsthesia of special senses is sometimes marked in this stage, and is usually more or less present. The ability to smell pepper is at times, though rarely, absent. The inability to taste quinine in solution is common. Color-blindness is frequent.

These patients are facile, easily diverted from their delusions, and usually conform to necessary restrictions without objection.

All paretics do not have these extravagant delusions, a sensible percentage being depressed and melancholic through the expansive period of the disease. This change often seems due to the presence of some visceral lesion, the cure of which is followed by the ordinary mental symptoms. But these cases are never melancholic, as are cases of melancholia. They usually eat well, and their depression, albeit accompanied by a dull and lethargic mental action, often gives evidence of a good deal of self-feeling. Such patients are often vain of their personal appearance, and evince ideas of self-importance in a more or less subdued form. In the third stage these cases differ in no respect from those previously described.

In the second stage the motor symptoms are more marked, and keep pace with the mental. The tongue-tremor and defective speech increase. The patient cannot say "Round about the rugged rocks the ragged rascals ran" without a serious clipping of syllables. A slow, shuffling, cautious gait, not at all like the walk of the hemiplegic or tabetic, is commonly seen at this time. It is hurried, spasmodic, like a man starting off for a run. They go ahead pretty well, but if suddenly called upon to stop, they cannot accommodate rapidly, and so come about clumsily, in a considerable half-circle. Alteration in penmanship is a very early symptom, the handwriting becoming coarse, illiterate and tremulous from increasing muscular inco-ordination. There is a strong and increasing tendency to drop words, the shorter and least important being usually omitted through forgetfulness. Epileptiform and congestive attacks are certain to occur more or less frequently throughout the disease. These are followed by hemipareses or paralysis of a more or less extended character. There is usually a subsequent period of confusion, that in some cases becomes unconsciousness, following these attacks, and is of variable duration. But any hemiplegia is soon recovered from, thus distinguishing these fits from apoplexy. Marked mental deterioration follows these seizures, patients often becoming careless of their person and gross in their appetites. The fits may kill at once, or may recur at irregular intervals, following a similar course in each attack. Hæmatoma auris is a frequent sympton in general paresis, may be unilateral or bilateral, and consists of a bloody gelatinous effusion separating the outer skin from the perichondrium. If left alone the tumor swells, fills the cavity of the helix, and at times ruptures. But whether it ruptures or shrivels, there is usually, unless properly treated, great resultant contraction and deformity. Alteration in the tendon reflexes should be mentioned as present in a large proportion of the cases. These may be abnormally exaggerated or diminished; in a few instances they appear unaffected. The patellar tendon reflex is the one most commonly examined. Patients are very prone at this time to become emotional; breaking down in the midst of a statement of some extravagant claim to weep piteously. Hysterical laughter is frequent also. Both appear without appreciable cause. There is a slight evening rise in the temperature of the general paretic. This is seldom less than 1°, save in cases where the disease is arrested; then it may be as little as 0.4°. Bucknill and Tuke give the temperature record of a case under observation from August, 1869, to January, 1875, in which the above fact is clearly demonstrated. Of course all diseased action which gives rise to increased temperature, independently of disease of the nervous system, must be carefully excluded. Dr. Macdonald, of the New York City Asylum, in an article published in the *American Journal of Insanity*, April, 1877, states that, in his cases, the average of difference between the morning and evening temperature was half a degree in *sthenic* cases, while in the asthenic form it was *lower* by half a degree in the evening than in the morning. He adds, fifty cases give a rise of 1° between temperature before and after a maniacal exacerbation, and of 1½° between that before and after a convulsion.

In the latter part of the second stage, as his mental movements become dull, the loquacity of the paretic subsides and his delusions are infrequently referred to. He accumulates flesh, becomes fat and gross, and his skin is flabby and greasy. Considerable mental improvement sometimes accompanies this remission, and patients are often removed from asylums by their friends in the belief that they are recovered or much improved. This hope is, however, fallacious. If removed they rapidly relapse. They are incapable of effort or continued application, and deficient in memory. The attempt causes exhaustion and lights anew the acute symptoms that had been allayed. At times, however, the apparent improvement, under favorable circumstances, may continue for a year or more. At such times it is not uncommon for the friends of such an one to move to set aside the action of the court in the appointment of a guardian over the person and property of the patient. Medical testimony is often sought as to the competency of patient to manage his business interests. It is never wise to set aside such control, a delay of a few weeks or months being usually sufficient to dissipate the favorable symptoms. This change is indicated in fresh excitement, degraded habits, and rapid mental and bodily degeneration. The facial expression becomes vacant and puffy. He rapidly tires; can walk but little, and requires constant attention. If confined to bed, bed-sores appear and rapidly spread. Complete relaxation of sphincters and the filthiest habits are common. His speech is now a tremulous drawl. He occupies one position for hours, hopelessly demented, and utterly fatuous. Discordant grinding of the teeth is a very common symptom in this stage; this is often kept up until the teeth are worn to the gums or are loosened from their sockets and fall out. The appetite is still good, but deglutition is apt to be feeble. If not carefully watched, patients will go on filling their mouths with food until it is impacted in œsophagus or larynx and strangulation is imminent. Many die in this way. The patient now requires the care and attention of a young infant, and as he gradually sinks into mental extinction, you may often catch in his eye the ecstatic self-absorption his tongue can no longer voice.

"Last scene of all,
That ends this strange, eventful history,
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans—everything."

Authorities agree in giving the average duration of general paresis as three years. Cases do, however, last longer, a duration of six years being not very uncommon. Blandford had a case that lived fifteen years, and Clouston one that had lasted *twenty-three* years at time of writing (1883). This phenomenal duration would seem to throw doubt upon the diagnosis. Males are largely the subject of general paresis, suffering eight times more frequently than females. Dr. Savage notes an interesting fact in this connection, that, with the enlarging scope of woman's work, cases of this disease are with them much more frequent. It is most common between the ages of thirty-five and forty-five. It rarely occurs before twenty, although cases have been reported at a much earlier age. The prognosis is uniformly bad. There is no well-authenticated case of recovery from general paresis. I have not mentioned the peripheral, sensorial, and tabetic forms of the disease, as they differ from the cases described in inception alone, their subsequent history following the characteristic course. It is sufficient, perhaps, to intimate that cases may originate in this way.

"The diagnosis of general paresis," says Griesinger, "is, in the great majority of cases, no difficult task. It is based upon the symptoms we have been describing; the general and incomplete nature of the paralysis; its progressive nature; upon the convulsive character of the early symptoms of the disease—its commencement with trembling of the tongue and lips; upon the special character of the mental derangement, particularly the ideas of greatness and the rapidly ensuing mental weakness; upon the irregular course. It is by regarding these symptoms that we, in general, succeed in distinguishing this affection from paralysis due to cerebral hemorrhage, embolism, encephalitis, tumors of the brain, hysterical and toxic paralyses; from progressive spinal paralysis, the tremor of old age, and grogressive muscular atrophy." It should be added that the diagnosis between this disease and conditions present in the insanity of chronic alcoholism is often, in the absence of a history of the case, well-nigh impossible. Dr. B. B. Fox, an English alienist, in the *Journal of Mental Science* (July, 1884), after giving cases of chronic alcoholism, in which all the typical symptoms of general paresis were at times manifested, adds:

"The mental exaltation of chronic alcoholism in some cases possesses nothing to distinguish it from general paresis. Occasionally, too, the physical signs of the two diseases so far resemble one another that they can only be differentiated by the history and other circumstances connected with the case, and in some rare instances only by watching the course of the malady. The delusions of chronic alcoholism are usually fixed, constant, and ineradicable."

The temperature changes are also absent in chronic alcoholism. Cases of chronic maniacal excitement often present diagnostic difficulties—puzzles that can only be solved by a careful analysis of symptoms and opportunities for prolonged observation.

From what has been said it will be inferred that the treatment of general paresis is unsatisfactory in the extreme. To attempt the treatment of a disease recognized as incurable cannot fail to be so. Yet, symptoms can in many instances be ameliorated, and the person and property of its unfortunate subject be protected by early recognition of the nature of the disease. First of all, the paretic needs a complete change of surroundings, removal from home, absence of all cares and responsibilities, a non-stimulating diet, and suitable out-door exercise, which should be under observation and not exhausting. Excesses of any sort operate unfortunately. An increased susceptibility to the influence of powerful drugs is noticeable, and considerable caution in their administration is required. The perfection of careful nursing, under unstimulating surroundings, does more to prolong the life of the paretic than anything else. For these reasons the longevity of paretics whose circumstances admit of constant observation and careful individual attention is much greater than in ordinary cases. The *advantage* of this, however, in a disease so distressing in many of its phases, and so certainly fatal, may well be questioned.

The *pathology* of general paresis has little to do with its *early* diagnosis, and is, therefore, rather without the scope of this paper. Cases occur that cannot be, or, at least, are not recognized until the characteristic degenerations are found at the autopsy. To go fully into this department of the subject is beyond my purpose and the limits of this article. It will be sufficient to give a rapid *résumé* of the appearances commonly present. Changes are marked in proportion to the duration of the disease. The scalp is thick and hairy; the calvarium dense, thick, and hard; deploë often obliterated. The membranes are all thickened and toughened, and commonly are abnormally vascular. The dura, in addition, is more or less adherent, and is separated from bone with difficulty. The arachnoid is mottled with white spots, or striated with white bands along the sulci. The convolutions are seen dimly beneath this through an opaque, gelatinous fluid that oozes out when the arachnoid is pricked. This is a compensatory fluid that fills the subarachnoid space, taking up the room lost through atrophy of the convolutions. The pia adheres so closely to the outer layer of gray substance on the *ridges* of the convolutions that in attempting to raise it portions of the cortex are pulled away with it, giving the convolutions an eroded appearance that is very characteristic. Considerable wasting of the gray matter is noticeable in cases of protracted duration. A line of red congestion is seen between the layers of gray matter, and irregular patches of congestion are found in the white substance. The ventricles are nearly always enlarged, and often contain an excess of fluid.

There are no constant visceral lesions. What, then, *is* general paresis?

Dr. Joseph Wigglesworth, in an article on the "Pathology of General Paralysis," published in the *Journal of Mental Science* (January, 1883), calls attention to the extensive hyperplasia of connective tissue, and increase and development of the cells of the neuroglia found in all cases of general paresis, as ground for the following deduction, as ingenious as it is fascinating:

"The conclusion, then, finally arrived at is, that general paresis is a true interstitial inflammation of the brain running a subacute or chronic course; that it is, in fact, a true cirrhosis of the brain altogether comparable to cirrhosis of other organs, such as that of the liver; in other words, that connective-tissue hyperplasia is the primary element in the disease, and the affection of the nerve-cells secondary."

This view was first advanced by Rokitansky, and other pathologists have given it their adherence.

57 West 130th Street.

The Surgery of the Pancreas.—In an elaborate paper, based upon experiments and clinical researches, and published in *The American Journal of the Medical Sciences* for July, 1886, Dr. Nicholas Senn attempts to lay the foundations for a rational method of direct surgical treatment of some of the injuries and diseases of the pancreas. The literature on the surgery of the pancreas is exceedingly scanty, and loosely scattered through the medical journals and text-books, as no previous attempt has been made to arrange the material in a systematic form for ready reference. Our present knowledge of the surgical treatment of diseases of the pancreas is limited to a few operations performed for the cure of retention cysts, by excision or the formation of an external pancreatic fistula. The clinical material which the writer has collected, and more particularly the description of pathological conditions found within and around the pancreas at post-mortem examinations, is utilized for the purpose of pointing out new indications for operative interference, by such methods as will suggest themselves from the results obtained by experiments upon animals.

THE DEATH-PENALTY; PROPER MODE OF ITS INFLICTION.

By WOOSTER BEACH, M.D.,

NEW YORK.

CAPITAL punishment under the laws of the United States may be inflicted for treason, murder, arson, rape, piracy, robbing of the mails, if associated with jeopardy to the lives of the custodians, rescue of a convict about to be executed, burning a vessel of war, and corruptly destroying a private vessel.

In Iowa, Wisconsin, and Maine capital punishment was abolished, but restored in the former State after four years' trial, as during this period it was found that there had been a material increase in violent crimes.

In former times death was the ordinary punishment for all felonies, and it is within the memory of some of our residents that persons were hung for robbery and other comparatively slight offences. Popular feeling tends at present toward the entire abolition of the death-penalty, but it is pretty generally conceded that the time for such a change has not yet arrived. All, however, seem to agree that when the death-penalty is inflicted it should be done skilfully, expeditiously, and in a manner causing the culprit as little pain as possible.

That with us this humane plan is frequently not carried out is attested by the numerous reports in the newspapers of bungling executions. In some the trap has failed to fall, and the prisoner has had to undergo the agony of a second and, in a recent case in England, a third preparation for death before the scaffold could be made to do its duty.

In others the same thing has occurred from the rope used for hanging, breaking as it was suddenly strained by the weight of the body. Again, the drop has been so long that the head has been completely torn from the trunk by the force of the fall.

At other times the noose has not tightened enough to completely cut off the air-supply, and a strangulation could only be effected by readjustment of the rope, while the body was still suspended. A mishap of this kind occurred when a negro was hanged at the city prison a few years ago. He was able to cry out for help for some time after being jerked into the air.

Various other accidents have happened, even when the hangmen employed have had experience and had the reputation of being skilled in their duty.

These painful exhibitions usually call forth expressions of horror and disgust from the press coupled with a tirade of censure against the "bungling hangman," and then the matter is dropped until, perhaps, the next execution, when there will be some variation in the bungling, and some variation in the press comments, but otherwise no change follows.

Attempts at reform in carrying out the death-penalty have been made in this country, but they have been mostly suggestions of some substitute for hanging.

On April 3, 1878, Dr. John H. Packard, of Philadelphia, read a paper before the Medico-Legal Society of this city in which he advocated the use of carbonic-acid gas to take the place of hanging. He proposed that a tight chamber, so arranged that it could be rapidly filled with the gas, be provided, and that the criminal, after being properly identified, be placed in it, the gas turned on, and he allowed to remain there until life was extinct.

Carbonic acid or carbonic oxide is used in a similar way to destroy dogs at the Philadelphia pound, and it works rapidly and effectually.

A committee was appointed by the Society to consider the paper of Dr. Packard. Their report was adverse to the proposed plan, or to any other than hanging.

In the discussion of the report Dr. William A. Hammond said that the proper method to hang a man was to dispense with the usual traps and weights, and draw up the body slowly. He further suggested that weights might be attached to the feet to obtain sufficient tightness of the noose to effect strangulation.

A paper was read before the Society of Medical Jurisprudence of this city by Dr. N. E. Brill, in which the inhumanity of the present mode of inflicting death was dwelt upon and a remedy called for. A committee on this subject was appointed who drew up a bill and presented it before the New York Legislature, but it was not passed. The bill made it possible for the culprit to choose the mode that should be used to take his life.

Dr. Graeme M. Hammond read a paper on hanging before the Medico-Legal Society in 1884, describing his own sensations when submitting to an experiment in which his neck was tightly constricted by a towel. From his experience and his study of the subject he reached the conclusion that death from hanging was not especially painful, and he advocated the plan, previously spoken of, of Dr. William A. Hammond, viz.: a slow, carefully conducted suspension of the body.

The methods of inflicting the death-penalty in civilized countries, other than by hanging, is, beheading by the sword in Germany, by the guillotine in France, garroting in Spain.

The substitutes for these, besides the one mentioned by carbonic-acid gas, are electricity, poisoning by hydrocyanic acid, or by chloroform.

The writer, in addition, would propose shooting, either as in military executions, when, if expert marksmen were employed as executioners, certain, speedy, and painless death could be relied upon; or, the following even more certain plan is suggested: Secure the condemned individual in such a position that a vital part shall be struck by a ball from the weapon which previously has been sighted and screwed fast in place. Thus any person discharging it could not fail to do so with fatal effect. The principal objection urged against electricity is that it is uncertain; that the apparatus for generating it may not be in perfect order; or, for other reasons, the charge may not be powerful enough to produce death. This objection can scarcely hold at present, as with improved machines a galvanic current quite powerful enough to kill a man can be generated with absolute certainty. Chloroform or hydrocyanic acid can be depended upon to cause speedy and probably painless death.

All these untried methods would undoubtedly be exceedingly difficult to bring into use to replace the present custom, firmly established by its employment for so long a time.

With shooting as a mode of execution, however, the public is familiar. It is adopted in the army, and it does not appear to the writer that it would be especially difficult to make its use general if it could be shown to possess special advantages over hanging.

But, before deciding on any attempt to substitute any other method for this, it will be well to examine its claims more fully.

Judicial hanging is now done in two ways. The person to be executed is either suddenly drawn up by a heavy weight or dropped by springing a trap on which he stands. In both cases there is more or less slack rope used, so that it is pulled taut with a jerk violent in proportion to the amount of slack and the weight of the body. The intention of the hangman is to cause death by breaking or dislocating the neck, rather than by strangulation. This failing, it is supposed that the jerk from the shock will be sufficient to abolish sensation to a degree that will prevent suffering from the constriction of the rope.

The rule is that none of these objects are accomplished by the methods in use.

Autopsies of bodies that have been thus hanged show that in not over five per cent. is either dislocation, fracture, or any injury to the cord observed. Unless the long drop is used, in which there is great danger of the head being torn from the body, it is unlikely that the vertebræ will be broken or displaced.

The movements of the individual soon after being suspended indicate purpose too plainly to be attributed to "reflex action," as is maintained by some, and if this does not prove that consciousness and sensibility are not destroyed by the fall, the fact of intelligent exclamations having been made under the same circumstances cannot make the matter doubtful.

It appears very certain, then, that neither the drop nor the weight accomplishes the wished-for object—a painless death—on the contrary, the effect of both is to very decidedly add to the suffering. The violent tightening of the noose not only deeply indents and wounds the surface of the neck, but the larynx or trachea are actually fractured by the powerful constriction, and until strangulation occurs, which is quite likely to be prolonged, from the rope being misplaced by the fall, the victim cannot but suffer exquisite torture till asphyxia produces insensibility.

In exceptional cases death from judicial hanging appears to be painless. The body remains motionless after it is suspended, and there is every indication showing that, with the tightening of the noose, immediate abolition of sensation takes place, yet examination after death shows no injury to brain or cord.

What is the explanation of these expeditious deaths?

A study of the subject must lead to the conclusion that they will occur if the entrance of the air and its exit is completely prevented.

To discover the most effectual way of doing this, the writer made the following experiment: The thorax of the body of a man about thirty-five years of age was opened, the trachea divided low down, and a tube fastened into it. The neck was so arranged that a loop of rope crossed the throat, and, hanging down beneath, weights could be attached, thus indicating the pressure of the rope on the air passages. By blowing through the tube, the amount of obstruction to the passage of air could be appreciated with considerable exactness. It was found that fifteen pounds weight on the rope would produce complete obstruction if the pressure was brought to bear on the os hyoides, or just beneath over the thyrohyoidean membrane; but below, on the larynx or trachea, the weights that have been provided for the experiment were insufficient to stop the passage of air. The weight of a person (say one hundred and twenty-five pounds) standing on the loop, was not enough to produce occlusion.

That slight pressure, if properly applied, may cause death is attested by occasional suicidal cases. In one, observed by the writer, in this city, a large silk neckerchief served for the purpose of self-destruction. It was tied in a loop, one end of which suspended the neck of the suicide, and the other was thrown over the post of a low bedstead. Nearly the entire length of the body touched the floor, the head and chest only being held up by the neckerchief.

Similar cases are reported in works on medical jurisprudence. A number are described and illustrated by Tardieu, in "La Pendaison," all showing death to have resulted from very moderate pressure on the air-passages. Various causes of death in hanging are given, besides asphyxia. Shock, syncope, injury to the cord or medulla, obstruction of arterial and venous circulation, pressure on the vagi are said to take a more or less prominent part in extinguishing life. That the first three mentioned must act promptly cannot be denied, but they occur very seldom. Insensibility might take place after a time from pressure on the blood-vessels and nerves, but this cause could scarcely come into play in ordinary hanging.

Asphyxia, then, is what we have to depend upon to produce death, or, at least, the insensibility preceding death in our criminal executions.

That asphyxia can be produced with comparatively slight pain or distress when the constriction to the neck is made under certain conditions is proved in various ways.

Almost conclusive proof is furnished by the statements of those who have accidently been rendered unconscious by hanging and have been resuscitated—such as the cases of Fleischman and Hornshaw, quoted by Taylor, which certainly seem to prove the moderate amount of suffering caused by asphyxia. Dr. Hammond's experiments are also to the point.

It would seem, then, that if we wish to take life by hanging in the most speedy, certain, and painless manner we must adopt the plan before mentioned, as recommended by the Drs. Hammond—to put a rope around the neck of the man and slowly draw him up.

But this is not all that is required. It is essential that the noose be carefully placed, so that on tightening, it shall constrict the parts necessary to entirely cut off respiration; that is, just above the larynx, and there it shall remain unmoved till death takes place.

Some contrivance might easily be invented to hold the rope in place, as it is drawn taut, but the average sheriff ought to be depended upon to effectually manage so simple a matter.

OPHTHALMIA NEONATORUM—ITS CAUSE, PREVENTION, AND TREATMENT.

By J. E. WEEKS, M.D.,

NEW YORK,

RESIDENT ASSISTANT SURGEON OPHTHALMIC AND AURAL INSTITUTE, ETC.

It is not my intention in the following paper to discuss at length the cause and prevention of ophthalmia neonatorum. These points are already fairly well settled. As, however, there exists a wide diversity of opinion among the members of the medical profession in this country as to the proper method of treating this disease and gonorrhœal conjunctivitis in the adult, I may be pardoned for dwelling at some length on this point.

Ophthalmia neonatorum probably causes more blindness than any other one disease that the eye is subject to. An idea of the number of blind so caused may be obtained from the following: Institute for the Blind, London, twenty to thirty per cent. (Brady, 1884); of 326 blind in Constantinople, 4.3 per cent. (Milligan); Landesblindenanstalt, Purkeisdorf, sixteen per cent.; of 2,528 blind reported by Magnus,[1] 1883, 10.82 per cent.; of the blind in the city of Breslau,[2] 17.5 per cent.; in Mecklenburg,[3] of 172 cases of ophthalmia neonatorum, seven per cent. became blind; Horner states that of the children brought to the institutions for the blind in Germany and Austria, thirty-three per cent. have lost their eyes by this form of blennorrhœa. These figures are sufficient to indicate the importance of a thorough knowledge of how to prevent and how to treat ophthalmia neonatorum.

Etiology.—By far the greater number of the cases of ophthalmia neonatorum are caused by the entrance of the gonococcus into the conjunctival sac of the infant at the time of, or very shortly after, birth. This assertion has been proven to be true by the researches of Zweifel,[4] Widmark,[5] Welander,[6] Leopold and Wessel,[7] Kraus,[8] Andrews,[9] and many others. Widmark mentions two forms of ophthalmia neonatorum, of which one only is due to the gonococcus. His views correspond with my own in this respect. In seventeen cases of ophthalmia neonatorum that have been examined by me at the Ophthalmic and Aural Institute, recently, the gonococci were absent in two; these two cases developed about two weeks after birth, and were of a mild type. That the constitutional effects peculiar to gonorrhœa may accompany ophthalmia neonatorum is demonstrated by the case reported by Lucas:[10]

[redacted]

[1] Die Blindheit, ihre Entstehung und ihre Verhütung. Breslau, 1883.
[2] Arch. of Ophthal., vol. xv., No. 1.
[3] Prof. Schatz, Deutsch. med. Woch., 1884, No. 1.
[4] Arch. f. Gynäk., vol. xxii., p. 318.
[5] Hygien, 1884, p. 404. [6] Nord. med. Arkiv, Bd. xvi., No. 2.
[7] Arch. of Gynäk., vol. xxiv., p. 89.
[8] Centralbl., f. Augenheilk, May, 1882. p. 134.
[9] New York Med. Jour., October 24, 1885.
[10] Br. Med. Jour., February 28, 1885, p. 429.

A child, eighteen days old, suffering from ophthalmia neonatorum, was brought to Guy's Hospital on account of an affection of the joints. The mother had had a thick purulent discharge from the genitals some time before the child was born. The child was undoubtedly infected during labor. The left knee was swollen and puffed out by an effusion into the joint. A synovitis at the wrist also existed.

Lucas is of the opinion that as synovitis from gonorrhœa of the urethra is probably due to the passage of the gonococci through the lymph-channels, the same may occur in gonorrhœa of the conjunctiva.

Landau [1] has inoculated the healthy urethra with pus obtained from the conjunctiva in a case of ophthalmia neonatorum; gonorrhœa of the urethra followed.

In regard to the number of the cocci contained in the secretions during the various stages of blennorrhœa of the new-born, I have found the following to be the rule: In the early stage, when the discharge is muco-purulent, the cocci are proportionately most numerous. They are then seen in the nuclei and at the margins of the epithelial cells, on the surfaces of and in the pus cells. When the discharge is very profuse their number is relatively less. They disappear entirely only when the discharge of pus has ceased.

Ophthalmia neonatorum due to the presence of the gonococcus is of very varying degrees of severity. The cause of the blennorrhœa can only be determined positively by an examination of the secretion with the microscope. I cannot agree with Andrews in his statement that gonorrhœal ophthalmia is nearly always severe. In six cases recently examined by me, where the gonococci were found, only two were severe. Ulceration of the cornea occurred in one case, but did not perforate. As to the manner in which ophthalmia neonatorum is contracted, Saemisch thinks that during long and tedious labors the infectious material may work itself between the lids. The first bath is probably a very fertile source of infection (Königstein). Unclean hands, sponges, towels, wrappings, etc., are also means for carrying the infectious material.

The chronicity of gonorrhœa in the female is a well-established fact, as indicated by the papers of Bockhart,[2] Currier,[3] and others; hence the appearance of ophthalmia in children, the mothers of whom have experienced the acute symptoms of gonorrhœa years before they became pregnant.

Prophylaxis.—Before the adoption of Credé's 'method, Bischoff, of Basle,[4] Haussman,[5] Olhausen (Königstein), Credé, and others, practised douching the vagina with a one per cent. solution of carbolic acid at intervals during the first stage of labor. Bischoff, Hausmann, and Olhausen washed the eyes of the infant with the same solution, either immediately after birth or just after the first bath. Credé used a solution of boracic acid—1 to 60—and cleansed the eyes immediately after birth. These procedures greatly lessened the number of cases of ophthalmia neonatorum, but did not abolish the disease. In 1880 Credé began the use of nitrate of silver in the following manner: A small drop of a two per cent. solution was instilled into the conjunctival sacs of the infant, immediately after it had received its first bath. In some cases the reaction following was quite severe, necessitating cold applications to the lids. No serious complications, however, ever occurred. This method resulted in virtually abolishing ophthalmia neonatorum from the clinic. With 7.8 per cent. before, Credé had only about 0.31 per cent. of cases after adopting the use of the silver. The splendid results obtained by Credé were also obtained by Leopold and Wessel, Brunner and Pfeiffer,[7] Professor Schatz, Garrigues,[8] and many others.

[1] Königstein, Wiener med. Presse, 1884, No. 31.
[2] Vierteljahresschrift f. Dermatologie u. Syphilis, 1883, vol. i., p. 8.
[3] New York Med. Jour., 1885, October 17.
[4] Arch. f. Gynäk., vol. xxi., p. 179.
[5] Simpson, Edinburgh Med. Jour., April, 1883, p. 879.
[6] Arch. f. Gynäk., vol. xxi., p 527. [7] Arch. f. Gynäk., 1884, p. 476.
[8] Amer. Jour. of the Med. Sciences, October, 1884.

A reference to the papers of Oppenheimer [1] and Kreis [2] is sufficient to explain the great efficacy of a two per cent. solution of nitrate of silver, when employed at this particular time. The silver is a simple germicide, and serves to kill the cocci that have found their way into the conjunctival sac of the infant.

In the papers on the prophylaxis of ophthalmia neonatorum I have seen no mention of the use of a solution of sublimate either for douching the vagina or for cleansing the eyes of infants immediately after birth. As sublimate, even in a solution of 1 to 10,000, is an active germicide, I cannot see why it should not be efficacious when employed as mentioned. That it is efficacious is largely established by the following: During my service of two and one-half years at the Emigrant Hospital, a system of treatment for the prevention of ophthalmia neonatorum was adopted which resulted in the complete disappearance of the disease from the lying-in wards of that institution. When labor pains became marked the patient was sent from the waiting ward to the lying-in room, where she was bathed and was given a vaginal douche of from one to two pints of a 1 to 2,000 sublimate solution, care being taken to cleanse the vagina thoroughly. Immediately after the head was born the eyes were bathed with a solution of sodium chloride, about ten per cent. The sublimate solution was sometimes used to wash the eyes also. The results here attained would indicate that if the vagina is thoroughly freed from the cocci before the second stage of labor begins, there is little danger of infection to the infant. The second step in this method is simply one to insure cleanliness.

Since the results of ophthalmia neonatorum are so disastrous, it is clearly the duty of every obstetrician to employ some efficient means for its prevention. Either of the above methods are simple and easy of application.

Treatment.—The treatment of ophthalmia neonatorum is the same, whether due to the gonococcus or to some other agency. I shall discuss it from a bacteriological standpoint, and in order that we may understand the conduct of the gonococcus in relation to the tissues involved, and the effect of certain remedial agencies on these micro-organisms, I shall give the researches of Bockhart, Oppenheimer, and Kreis, so far as they relate to these points.

Bockhart injected a portion of a pure culture of gonococci, fourth generation, into the urethra of a paralytic. Forty-eight hours afterward the meatus was red, and on pressure a drop of pus exuded which contained numerous cocci. The patient died eight days after the inoculation. On section the right kidney was found to contain many abscesses; left kidney normal. The mucous membrane of the bladder and urethra, except at the prostatic portion, was greatly congested. Microscopical examination demonstrated the fact that the surgical kidney, cystitis, and urethritis were caused by the gonococcus. The cocci were found in great numbers *throughout* all the affected tissues. White blood-corpuscles, containing the cocci in their nuclei, were found in large numbers deep in the tissue of the corpus cavernosum urethræ.

This case serves to show that the cocci are not confined to the surface of the mucous membranes, but that they attack and penetrate the epithelium, and enter the deeper tissues.

In experimenting with different medicinal substances, as to their effect on pure cultures of the gonococcus, Oppenheimer arrived at the following conclusions: Solutions of the nitrate or sulphate of mercury, 1 to 15,000 retarded development, 1 to 10,000 destroyed vitality; sublimate, 1 to 40,000 retarded development; 1 to 20,000 destroyed vitality; permanganate of potash, 1 to 50 retarded development; 1 to 25 destroyed vitality. The chlorates of potash and sodium were inefficient. Carbolic acid, 1 to 20 destroyed vitality in ten minutes; 1 to 100

[1] Arch. f. Gynäk., vol. xxv., No. 1.
[2] Wiener med. Woch., 1885, Nos. 30, 31, 32.

retarded development; creasote, 1 to 2 destroyed vitality quickly; nitrate of silver, 1 to 50 (two per cent.) destroyed vitality. Bromine, chlorine, and iodine in solutions of moderate strength destroyed vitality; methylic and ethylic alcohol, chloroform, sulphuric ether, and glycerine destroyed vitality only when undiluted; tannin and resorcine were ineffective; solutions of the subnitrate of bismuth, acetate of lead, and alum produced no effect; strong solutions of the sulphates of copper, zinc, and iron affected the microbes but slightly; turpentine was effective.

The influence of temperature on the development of the gonococcus is shown by Kreis' experiments with tube cultivations on agar. Below 30° C. no development; 30° C. to 35° C. very slight development; 35° C. to 42° C. develop rapidly; 42° C. to 48° C. develop slowly; 48° C. to 50° C. no development. An hour and a half in a temperature of 48° to 50° C. renders the microbe incapable of development. The effect of medicinal substances on the microbes Kreis found to be as follows: Nitrate of silver, one-half per cent., microbes did not develop; one per cent., microbes did not develop; sublimate, 1 to 20,000, development; sublimate, 1 to 10,000, no development; sulphate of zinc, one per cent., development; sulphate of zinc, carbolated, one per cent., no development; sulphate of copper, one per cent., no development; acetate of lead, one-fourth per cent., development; acetate of copper, one per cent., development; alum, strong solution, development; chlorate of potash, five per cent., development; tannin and resorcine, one per cent. solutions, development; carbolic acid, five per cent., development; thymol, 1 to 1,100, no development; chloride of lime, one per cent., no development.

It is of interest to know how the remedial agents indicated as the best for the treatment of ophthalmia neonatorum, by the influence that they exert on the gonococcus, as shown by the experiments with the pure cultures, correspond to the remedies that experience has indicated as most efficient. For this purpose I have given a brief synopsis of the treatment advised by some of the various writers.

Mackenzie:[1] Eyes to be cleansed three or four times a day with a wash composed of sublimate, gr. j.; chloride of ammonium, gr. vj. to xij.; water, oz. viij. to xij. A solution of the nitrate of silver to be applied to the conjunctiva every six to eight hours. Solution, gr. ij. to x. to the ounce, not to be used if the cornea is affected. In one case two applications of the silver, made on the first and second days of the discharge, stopped the discharge. To preserve the lids from sticking together he employs an ointment of the red precipitate of mercury. A blister behind the ear is thought to be beneficial.

Stellwag:[2] If the secretion is profuse, "lead water" may be instilled between the lids. He recommends a solution of tannic acid as an application to the conjunctiva, but says that we may do still better by employing a 1 to 3 gr. solution of the nitrate of silver.

Wells[3] recommends a collyrium of alum and zinc (alum, gr. iv.; sul. of zinc, gr. ij.; water, ℥ j.) to be injected into the eye every fifteen to thirty minutes during the day; applications of the mitigated stick of the nitrate of silver to the conjunctiva once every day if the patient can be seen by the physician. Citrine ointment to the lids. In severe cases, leeches, scarification, and cold compresses.

Nettleship[4] advises washing the eyes frequently. Collyria of the sulphate or chloride of zinc, alum, or sublimate used every one to three hours; solutions of the nitrate of silver (gr. ij. to ℥ j.) applied from four to six times a day. Strong solutions of the nitrate of silver, or the mitigated stick, should be used in all severe cases, unless especially contraindicated, to shorten the disease; local cold by ice compresses, leeches to the temple, canthotomy if the swelling is intense, or scarification of the conjunctiva. He does not use strong solutions of silver until the discharge has become profuse. Corneal ulceration does not contraindicate the use of strong solutions of silver.

Julin:[1] To reduce pressure on the cornea, scarification of the conjunctiva, canthotomy, or vertical division of the upper lid as advocated by Mr. Critchett. "To cut short the inflammatory process, the best and most effectual treatment consists in the application of the solid nitrate of silver to the inner surface of the eyelids once in twenty-four hours, combined with the constant application of iced carbolized water and frequent ablutions of the conjunctival sac." The above quotation applies to gonorrhœa of the conjunctiva in the adult. A four to seven per cent. solution of the nitrate of silver is employed in ophthalmia neonatorum, instead of the solid stick. Uses carbolized water for cleansing the eyes, atropine if the cornea is affected.

Schmidt Rimpler[2] recommends constant cold applications to the lids, and the use of solutions of the nitrate of silver, or the mitigated stick, applied to the conjunctiva.

Dr. Abadie[3] favors the application of a three to four per cent. solution of the nitrate of silver to the conjunctiva every twelve hours, and says that it is an error to wait for the period of most profuse discharge before making the application. If the corneæ are threatened, must increase the frequency of the cauterization, must use ice compresses constantly.

Kianitzin[4] obtains good results from the use of a 1 to 2,000 solution of sublimate.

Landesberg[5] recommends solutions of boracic acid and a two per cent. solution of the sulphate of zinc in mild cases. Must use ice-cloths constantly if the swelling is intense; nitrate of silver, two to three per cent. solution, applied to the conjunctiva every twenty-four hours after the purulent stage is reached. Leeches canthotomy and eserine are recommended in severe cases.

The plan of treatment followed at the Ophthalmic and Aural Institute, is as follows: The conjunctival sacs are cleansed thoroughly every half hour, or more often if the discharge is profuse; constant applications of cold to the lids by the use of small pieces of linen, which are placed on a cake of ice near the patient, and are changed to the eyes every half minute, or as soon as the piece on the lid becomes warm another piece is substituted. The conjunctivæ are brushed with a one to two per cent. solution of the nitrate of silver morning and night, commencing when the discharge becomes profuse. If corneal complications arise, one or two drops of a one-half per cent. solution of atropine are instilled twice or three times a day.

In the plans of treatment recommended by the authorities mentioned, we find them agreed in the use of certain measures, namely, strict cleanliness, solution of the nitrate of silver, and hot or cold applications to the lids. It needs no argument to establish the advisability of cleanliness. The experiments of Oppenheimer and Kreis have demonstrated the fact that solutions of the nitrate of silver are active germicides against the gonococcus; and the experiments of Kreis, that a low or a high temperature prevents the development of the gonococcus. We find that the proper employment of these three factors is all that is necessary to meet all the indications in the treatment of ophthalmia neonatorum when the case is seen before perforation of the cornea has taken place. The duration of gonorrhœal ophthalmia, occurring in the infant (ophthalmia neonatorum) or in the adult, may be limited or cut short by proper treatment, the time required depending entirely on the extent to which the

[1] Mackenzie on the Eye, American edition, 1854.
[2] Stellwag on the Eye, American edition, 1873.
[3] Diseases of the Eye, edited by Bull.
[4] Diseases of the Eye. 1879.

[1] Ophthalmic Science and Practice. 1885.
[2] Augenheilkunde u. Ophthalmoscopie. 1885.
[3] Gaz. des Hôpitaux, No. 42, 1882.
[4] Wojenna Medicinsky Journal, November, 1884.
[5] New York Medizinische Presse, Bd. 1, No. 2.

gonococci have penetrated the tissues of the lid, the destruction of corneal tissue if the cornea is involved, and the rapidity with which the cocci are expelled from the tissues by the discharge of pus—the effort of the system to rid itself of the irritating agent. The so-called abortion of these conditions is simply a cutting short of the disease in its earliest stage. The following is an illustrative case:

Henry D—— came to the clinic at the Ophthalmic and Aural Institute, April 17th, at 2 P.M. On the morning of the same day patient noticed that the eye was painful and discharged a little mucus. When I saw the patient, a little after 2 P.M., the right eye was discharging muco-pus quite freely—conjunctiva of the left eye slightly congested. An examination of the secretion with the microscope showed gonococci in large numbers. A thorough application of a two per cent. solution of the nitrate of silver was made to the conjunctivæ of both eyes, and constant applications of iced cloths, with frequent cleansing of the lids was ordered. At 11 P.M. the lids of the right eye were much swollen. April 18th: Lids but little swollen; cold applications constantly day and night. April 19th: No discharge from the left eye; very slight discharge from the right eye. A second application of the nitrate of silver solution was made; cold continued. April 21st: No discharge; conjunctivæ only slightly congested. Patient discharged.

After the gonococci have penetrated the epithelium and have entered the lymph-channels we cannot expect to destroy them by a simple application to the surface of the conjunctiva; hence the necessity of employing some agency that will prevent their development, and at the same time will not interfere with the action of the tissues in their attempt to expel them. We have this means in the iced cloths employed, by the application of which we are enabled to reduce the temperature to the point desired. Heat may also be employed, but the rapid destructive changes in the tissues that sometimes occurs when the temperature is elevated, and the fact that cold applications are usually better tolerated by the patients, renders the latter more generally applicable.

The experiments of Kreis indicate that the coccus does not develop, or develops but slowly, at a temperature of 90° to 92° F. According to numerous tests that I have recently made, I find that the temperature of the conjunctival sac, in the various degrees of inflammation, ranges from 98° to 102° F. I also find that by constant cold applications the temperature of the conjunctival sac may be made 88° to 94° F., according as the lids are little or much swollen; this with the temperature on the surface kept at about 40° F. This reduction of temperature certainly retards the development of the gonococci, while it does not seem to interfere with the tissue-change necessary to expel them.

Taking into consideration what has preceded, the plan of treatment which I deem most rational is as follows, for the careful carrying out of which a trained nurse or a careful attendant is essential:

If but one eye is attacked, the well eye must be carefully guarded against the possibility of infection from the diseased eye. This is done by cleansing both eyes frequently with absorbent cotton or clean sponges, and clean, cool water, weak solutions of sublimate, boracic acid, etc. Sealing the eye in infants is very unsatisfactory; it may be done with benefit in adults. *Constant* cold applications to the lids should be made. I find the following method most efficient: Pieces of linen, twelve or eighteen in number, are folded into three layers, so as to form squares of an inch and a half. These squares are dampened and spread on a cake of ice. The nurse in attendance changes the pieces of linen to and from the eye sufficiently often to have a cold piece *always* resting on the lids. These applications are kept up *constantly* until the swelling of the lids subsides, and until the discharge has almost entirely ceased, usually from three to seven days. The plan of making the cold applications at intervals of two or more hours is certainly not advisable in these cases, as the temperature of the lids rises as soon as the cold is removed, and the development of any living germ in the tissue of the conjunctiva is resumed. I have witnessed the increase of inflammatory action in cases of this kind when the intermittent plan was followed. The secretion is removed from the conjunctiva by careful washing with cold or cool water, a clean sponge or absorbent cotton, usually every twenty or thirty minutes—more or less frequently according as the secretion is more or less profuse. Andrews' perforated speculum is a dangerous instrument in the hand of the nurse or the general practitioner, and although when properly used it may remove the secretion as well or better than any other method, it should only be used by one skilled in the manipulation of the lids. In these conditions applications of a one to two per cent. solution of the nitrate of silver are made to the surface of the conjunctiva every morning and evening, care being taken not to make the solution sufficiently strong to cause an increase in the inflammation of the lids when it is applied. The applications are made in the following manner: The lids are everted, and the solution of silver is brushed on the conjunctiva freely, with a soft camel's-hair brush. After the silver has remained in contact with the conjunctiva for fifteen to thirty seconds, it is washed off with a very weak solution of sodium chloride or simple water. The above-mentioned applications may be made in all stages of the disease, without regard to the condition of the cornea. If corneal ulcers exist, one or two drops of a one per cent. solution of the sulphate of atropine should be instilled between the lids two or three times a day. I find that the gonococci are present so long as the purulent discharge continues.

If the above plan of treatment be carefully carried out I am confident that no eyes need be lost by any form of gonorrhœal ophthalmia, if the treatment is commenced before the cornea becomes involved, and that corneal complications will be very rare. In nearly every case the progress of the disease will be arrested from the moment that treatment is begun. Canthotomy, Critchett's operation of a perpendicular incision through the middle of the upper lid, or scarification, I deem harmful and entirely unnecessary.

We may sum up as follows:

1. Ophthalmia neonatorum is one of the most productive causes of blindness.
2. By far the majority and all the severer forms of ophthalmia neonatorum are due to the presence of the gonococcus.
3. This disease is contracted during or shortly after the birth of the child.
4. Proper prophylactic measures may prevent its occurrence.
5. Ophthalmia neonatorum and gonorrhœal conjunctivitis in the adult are very variable in the degree of severity.
6. Both forms of this disease may be controlled and shortened in any of their stages by proper treatment.

46 East Twelfth Street.

Subcutaneous Injections of Citrate of Iron.—Dr. Mori recommends very highly the hypodermatic administration of citrate of iron in anæmia. In a pregnant woman with very marked anæmia great improvement followed daily injections of a syringeful of a one per cent. solution into the gluteal region. At the end of two weeks the patient was practically cured. In another pregnant woman eight injections sufficed to bring about a very great improvement. In a woman, fifty-four years of age, suffering from a very severe degree of anæmia, induced by hard work and poor food, twenty-five injections were required before any satisfactory amelioration was to be noted.—*Centralblatt für Gynäkologie*, June 5, 1886.

CASTS AND ALBUMEN IN PROSTATITIS.

By C. DREW, M.D.,

JACKSONVILLE, FLA.

In The Medical Record of February 13, 1886, in a letter from the special London correspondent, the following lines appeared:

"At the Clinical Society Sir Andrew Clark related a unique case of acute prostatitis, which had been seen by Sir James Paget and himself. During the whole course of the case the urine was found to contain hyaline cylinders and small, flask-shaped hyaline masses, which were in some cases connected with the cylinders. The casts were of the same character as those found in the urine in acute nephritis or acute congestion. An important diagnostic point was the presence of flask-like bodies attached to the hyaline cylinders." "He had met with two other cases which were similar, but less acute." The question naturally arises in the mind as to whether the structure of the prostate is of such a character as to develop a disorder moulding a plastic secretion, and its formation into cylinders or casts. Henle divides the prostate into "three portions—the two sphincters of the bladder; a tough, yellowish, muscular membrane; and the gland proper. The latter covering," he states, "sends off into the gland, a number of processes, forming a massive framework, and forming a considerable portion of the whole organ." "The separate elements of the gland, in number from fifteen to twenty, appear to be of the racemose kind. In them we find pear-shaped vesicles 0.1204 to 0.23 mm. in diameter, lined with columnar epithelial cells. The ducts of the gland are five, surrounded by a muscular coat. . . . They empty themselves singly, by fifteen or twenty openings, into the urethra."

"The sinus prostatica is a slender saccule, from 7 to 14 mm. in length, lying in the substance of the prostate gland. . . . It opens at the summit of the cannuliculi seminales, between the orifices of the ejaculatory ducts. The secretion of the prostate is probably allied to that of the vesiculæ seminales. In both we find albuminous matter, barely soluble in acetic acid" (Frey, "Histo-chemistry of Man"). We at once refer to Sir Andrew Clark's description of the pear-shaped hyaline masses, and compare it with Frey's description of the pear-shaped vesicles in the prostate. If plastic secretion is moulded in pear-shaped vesicles and thrown out as casts, many of them would doubtless retain their flask- or pear-shaped appearance. As the prostatic vesicles are lined with columnar epithelium, we would also expect to find another point of similarity to casts from the kidneys, namely, the presence of epithelia accompanying the casts of pear- or flask-shaped epithelial casts. So far as the writer is aware no mention has thus far been made of such bodies as having come from the prostate.

If such vesicles can form casts, we naturally infer that the prostatic sinus would also form them, and in confirmation of this, Drs. Van Buren and Keys, in their work on "Genito-urinary Diseases, with Syphilis," 1881, folio 247, state, in the article on "Acute Parenchymatous Prostatitis," "a false membrane may form in the prostatic sinus, but this is exceedingly rare.'

Can prostatitis, like nephritis, give rise to albuminuria? There have been many cases of transient albuminuria reported, for which it has appeared difficult to account, and there is good reason for the suspicion that acute prostatitis, with albuminuria, may be confounded with acute nephritis. We repeat briefly the quotation from Frey, made above: "The secretion of the prostate is probably allied to that of the vesiculæ seminales; in both we find albuminous matter freely soluble in acetic acid." We append briefly a report of two cases illustrative of such a possibility. Both were cases of acute prostatitis, occurring in persons of amorous disposition, but rather continent habits. No combination of circumstances is more likely than this to induce prostatic trouble—a failure to relieve sufficiently often one of the most urgent calls of nature.

Mr. C——, of amorous disposition, but continent habits, had been for about a year troubled with slight vesical irritation. In the summer of 1884, being much debilitated from overwork, he was attacked by lumbago and intense vesical irritation, the urine being passed for several days in small quantities, and at intervals of about fifteen minutes. Examination with heat and nitric acid revealed a large percentage of albumen—about one-fifth the total bulk as it stood in the test-tube; no casts were found after a careful microscopic examination. In six weeks, or less time, all albumen had disappeared, leaving evidences not to be doubted of subacute prostatitis, viz., urethral hyperæmia, vesical irritation, abnormal erections, anæsthesia of glans penis, fulness and soreness in the rectum, and tenderness over the pubes. At this time an examination of the urine was made—chemically and microscopically—by an expert in such matters, who stated that there was no evidence that he could see of any disease of the kidneys having existed. This patient still has prostatic disease, but no tangible evidence of any kidney lesion. The inference is, that during an attack of acute inflammation the prostate gland secreted copiously, perhaps mixed with a secretion from the vesiculæ seminales, and that this gave to the urine, with the usual tests, an albuminous reaction.

Mr. W——, widower, of amorous disposition, became involved in *une affair de cœur*, which, after much excitement and prolonged waiting, gave negative results as far as his gratification was concerned. It was, however, followed by acute prostatitis, and much vesical irritation. In this case there was no suspicion of kidney disease, the history of the case having at once directed attention to the prostate; but, led by past observation, an examination was made of the urine, and a decided but not copious precipitate of albumen found. In this case the attack was much less acute than in the first, and the amount of prostatic secretion perhaps much less. After a prolonged attack of prostatic trouble, assuming various phases, with many acute exacerbations, he has finally been restored to health, although up to the present time he finds it necessary to use extra precautions to avoid a recurrence of his old attacks.

A CASE IN WHICH VISION WAS TOTALLY OBLITERATED BY A GUN-CAP IN THE EYE.

By DAVID WEBSTER, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN NEW YORK POLYCLINIC; SURGEON TO MANHATTAN EYE AND EAR HOSPITAL.

An iron-moulder, aged thirty-five, residing near Sing Sing, on Saturday, November 14, 1885, at 10 A.M., attempted to remove the cartridge from a breech-loading shot-gun. The cartridge exploded and the cap struck him in the right eye, destroying the sight immediately. He was, without delay, sent to Dr. C. R. Agnew, at the Manhattan Eye and Ear Hospital, and on his arrival at that institution, a couple of hours later, he was examined by Dr. G. W. Hale, then the House Surgeon, now of Nashville, Tenn., who found that the gun-cap had passed through the upper eyelid and through the upper part of the ciliary region, a little to the outer side of the vertical meridian, the wound being irregular in shape and approaching to within an eighth of an inch of the corneal margin. The eye was without perception of light. The anterior chamber was filled with blood. He was seen later, on the same day, by Dr. Agnew, the conditions remaining unchanged.

I saw the patient, with Drs. Agnew and Hale, on Sunday morning—the morning after the injury. Then, as it seemed almost certain that the cap was in the eye, and as a good deal of inflammatory reaction was setting in, we agreed that the eye ought to be enucleated at once. As Dr. Agnew had an engagement elsewhere, he re-

quested me to perform the operation. Accordingly, assisted by Drs. Hale and Ring, I placed the patient under ether and enucleated the eye. I opened it on the spot. I found the whole of the interior of the globe filled with dark-colored fluid blood and blood-clots. The retina was not detached. The cap was found with its concavity backward, its sharp circular edge embedded in the retina and including the optic-nerve entrance. It was stuck so firmly in this position that it required some force to remove it with forceps.

The reason for the total obliteration of vision in the eye from the time of the injury was now evident. The edge of the gun-cap had cut off all communication of the retina with the optic nerve. Strangely enough, the gun-cap retained its original shape almost perfectly. The patient recovered promptly, and a week later was sent home wearing an artificial eye.

Clinical Department.

AN IMPROMPTU PUMP FOR STOMACH IRRIGATION.

Dr. Sara E. Post, of New York, sends us the following: Having recently a case requiring a stomach irrigation, I tried the funnel with the tube arranged as a siphon, in the manner usually recommended. The end of the tube with the funnel was elevated when pouring the water in, and depressed to induce its escape. The conditions were as perfect as possible, the portion of the tube outside of the body being longer than that lying within. When the tube was first depressed the water ran out freely, but it was found that, as a rule, the stomach was not completely evacuated by means of it. After the flow had ceased, manipulation of the epigastrium would cause it to recommence. Apparently the tube, either by not being introduced far enough, or by being introduced at too great length, and curling upon itself, would fail to reach the most dependent part; and as it is difficult to calculate the depth of the dilated stomach, this objection could not be overcome. As a weak solution of the bicarbonate of soda was used for the injection, the washing would be followed by several watery evacuations, apparently due to the cathartic action of the retained salt. Also, the water removed by the siphon would be almost clear, while from the history of the case it was expected that mucus would be withdrawn.

Some kind of a force-pump seemed necessary to accomplish the desired purpose, and having a stop-cock with two outlets, a rubber piston syringe, a stomach-tube, and some additional tubing, a suitable apparatus was readily arranged. The three arms of the limb containing the stop-cock were provided with tubing, the inlet was connected with the syringe, one of the outlets attached to the stomach-tube by a short intervening glass, and the other connected with the weight from the receiving tube of a Davidson's syringe, and sunk in the receptacle containing the fluid to be injected. It will readily be seen that by manipulating the stop-cock water could be withdrawn from the receptacle and injected into the stomach, or withdrawn from the stomach and injected into the receptacle. Compared with the siphon this method was most successful. The water withdrawn during the first washings was gray, from its admixture with mucus. The washings were no longer followed by diarrhœa, and relief of the symptoms was early obtained. After six washings mucus is no longer returned in the water, a localized tenderness of several years' standing has disappeared, discomfort so great as to interfere with sleep and to make the patient dread food has been lost, and digestion has apparently been re-established. The patient eats three meat meals per day, and is commencing to have a healthy desire for food. It might be added that the patient had previously been under the care of good physicians, and presumably had obtained all of the benefit which medication could give.

The washings are done three times a week, the patient taking no solids for six hours previously. Food could, however, be withdrawn by means of this apparatus, if the bore of the syringe and of the limb containing the stop-cock were sufficiently large. One quart of fluid is first injected and then withdrawn, the injection being repeated two or three times at each sitting. The introduction of the stomach-tube occupies but a few seconds. It seems better to force it down quickly, without much attention to efforts at regurgitation, as, when in position, the patient is comfortable, and breathes and talks with complete ease.

Previous spraying of the fauces with a four per cent. solution of cocaine facilitates the introduction of the tube.

This apparatus is, of course, not new. Its principle is exactly that of the ordinary stomach-pump. It is presented simply because while answering the same purpose it can be more cheaply gotten up.

AN INSTANCE OF SEEMINGLY UNUSUAL SUSCEPTIBILITY TO ETHER.

Dr. George W. Squires, of East Avon, N. Y., reports the following case: Mrs. W——, forty-five years of age, housewife, fell down stairs, striking her face against the railing, from which she sustained quite a severe contusion of the right cheek, with effusion of blood under the conjunctiva from the outer canthus to the margin of the cornea. When first seen she was suffering from a slight frontal headache, for the relief of which the writer applied to the forehead not more than six or eight drops of sulphuric ether with a camel's-hair brush. The patient at once said, "That is ether, and it is putting me to sleep," and in less than half a minute she was fully under the influence of the anæsthetic, remaining unconscious for several minutes, and upon recovery, and for some time afterward, presented all the symptoms following profound and prolonged etherization. She could not have inhaled more than three to five drops of the ether, as it was immediately washed from her forehead.

THE DESTRUCTIVE ENERGY OF THE TINCTURE OF THE CHLORIDE OF IRON ON THE TEETH.

An original paper of conspicuous merit, with the above title, was read before the Odontological Society of the State of New York, in June, by George W. Weld, M.D., D.D.S.

As the researches of Dr. Weld in this direction possess many points worthy of the careful consideration of every physician, the salient features of the paper are presented to our readers.

Dr. Weld declares that the clinical operation shows that water increases the destructive energy of the tincture of the chloride of iron upon the enamel of the teeth more than any other fluid, and, as an illustration, he states that the effect of adding water to a simple solution of the chloride of iron, *devoid of free acid*, is to give basic salts of iron and the separation of free hydrochloric acid.

Dr. Weld showed conclusively that the tincture of the chloride of iron of officinal strength had but little, if any, effect upon the enamel structure of a tooth when immersed in the same for a period of twelve hours; but that, when immersed in a solution of the tincture and water, in proportion of one ounce of water to one drachm of the tincture, the enamel was materially injured in five minutes.

As an illustration of this phenomenon the doctor stated that when a piece of zinc is immersed in strong sulphuric acid (H_2SO_4) it has been observed that the acid has no effect upon the structure of the zinc, but if a little

water be added to the acid, the zinc is at once destroyed; so that it is not entirely a matter of the strength of the fluids, so far as the quantity of iron or acid is concerned, but a matter of construction or solubility. The zinc in the strong sulphuric acid is protected in the same manner that the tooth which is immersed in the strong tincture of chloride of iron is protected, viz., the surface is blocked up with the basic salts of iron insoluble in alcohol, which prevents chemical action. In the case of the zinc, it is the sulphate of zinc resulting from the first action, and insoluble in the concentrated acid, that forms a protecting coat over the surface of the zinc; the addition of water dissolves this protecting sulphate, and renders further chemical action possible. In the case of a tooth immersed in a strong solution of the tincture a similar action takes place, viz.: the oxide of iron first formed protects the enamel from immediate chemical action on account of its compact adherence to its surface.

To illustrate still further, Dr. Weld called attention to two specimens of teeth on the card [1] which had been immersed in the tincture and alcohol, and compared them with teeth which had been immersed with the tincture and water. Here it was observed that, although the alcoholic solution used contained the same quantity of the tincture and possessed apparently the same relative strength, and the teeth immersed for the same length of time, yet no injurious effect was produced on their lime salts. The reason is attributed to the fact that alcohol is a dehydrating compound, and the peroxide which is formed in the alcoholic solution is of the anhydrous form, and in character very compact, adhering closely to the surface of the tooth, thereby preventing immediate chemical action; while on the other hand, in the presence of water, the peroxide, which is precipitated in the hydrated form and is flocculent in character, does not so well adhere to the surface of the tooth, leaving the free hydrochloric acid in the solution to unite with the lime salts with greater facility.

There appears, then, to be two forms of peroxide of iron, viz.: 1, the hydrated form ($Fe_2(OH)6$), found in the water solution, which is flocculent and non-protecting to the teeth; 2, The anhydrous form (Fe_2O_3), formed in the alcoholic solution, which is heavy and compact, and protects the surfaces of the teeth. The following formula will show how the hydrated peroxide is formed from the anhydrous peroxide ($Fe_2O_3 + 3H_2O = Fe_2(OH)6$).

Synonyms: Ferric hydroxide.
Hydrated sesquioxide of iron.

The teeth immersed in an ounce of the elixir of the pyrophosphate of iron, with one drachm of the tincture of the chloride added, for a period of twenty-four hours, produced apparently no chemical effect on the enamel; but with the same quantity of water and the tincture the enamel was completely destroyed. The elixirs are composed of nearly twenty-five per cent. of alcohol, the presence of which, as observed in the strong solution of the tincture and in the alcoholic solution, affords a protection to the enamel of the teeth in the manner described. But it is to be noted that when a tooth is immersed in a solution of the tincture and simple syrup, in the above proportions, the enamel is but little affected. This is due to a mechanical reason, or a condition of fluidity of the solution, *i.e.*, the presence of the sugar in solution coats the surface of the enamel, preventing the chemical affinity between the acid, or perchloride of iron, and the lime salts in the teeth.

The manner in which syrup modifies the destructive energy of the tincture on the enamel was beautifully illustrated by the effect produced on the specimens of teeth which had been immersed in three different weak solutions of phosphoric acid. Two of these were proprietary medicines and contained water, and the effect was to injure the enamel of a tooth in one hour; while the third, a syrup solution (each fluid drachm containing two grains of free phosphoric acid), produced but little, if any, injurious effect on the enamel in twenty-four hours.

Equally interesting was the effect produced on the enamel of teeth which had been immersed in a solution of the tincture and the weak alkaline waters (notably Vichy).

When a drachm of the tincture is added to an ounce of the Vichy water, a slight effervescence occurs, indicating that the bicarbonate of soda contained in the water has neutralized a part of the free acid contained in the tincture; in consequence, when a tooth is immersed in such a solution, the destructive energy of the iron is, to a great extent, modified. Unless the specific nature of the tincture of the chloride of iron is materially affected (and the peculiar odor of the tincture remains), there seems to be no reason why this preparation of iron, at least in all cases of anæmia, should not be administered in combination with Vichy water.

There are, then, three menstrua which may be employed to modify the destructive energy of the tincture of the chloride of iron on the enamel of the human teeth. The first is alcohol in some form. The second is Vichy water, which neutralizes to a slight extent the free acid contained in the iron. And the third is some form of an elixir or simple syrup.

[1] A glass case presented to the Odontological Society, containing sixty-four teeth, showing with various modifications the destructive energy of different acids and iron compounds on the enamel.

Progress of Medical Science.

SCARLATINAL NEPHRITIS.—Scarlet fever derives most of its dangers from disorders that complicate or succeed it. Of these the most important are derangements of the kidneys, and a number of recent writers assert that these organs are constantly affected in scarlet fever. In an article on this subject, in the July number of *The American Journal of the Medical Sciences*, Dr. I. E. Atkinson, of Baltimore, maintains that future research may show that simple renal catarrh accompanies all cases of scarlatina, but it is certainly not true that renal alterations, competent to excite albuminuria or to reveal themselves *post-mortem* to reasonably careful inspection, are invariably present. Renal catarrh, however, is much more frequently an accompaniment of scarlatina than is generally supposed. It usually escapes observation, as it is only exceptionally revealed by symptoms, and can only be recognized after microscopic examination of the urine, a procedure too often neglected, but of the greatest importance as often anticipating dangerous processes that may be averted by timely treatment. Its clinical history, pathological anatomy, and most approved method of treatment are fully considered.

THE FUNCTIONS OF THE MEMBRANA TYMPANI ILLUSTRATED BY DISEASE.—Sir William Dalby, in a brief but instructive article in the July issue of *The American Journal of the Medical Sciences*, maintains that our knowledge of the functions of the membrana tympani may be added to by the observation of this structure when it becomes altered by disease. He points out that structural changes in the tympanic membrane, as, for instance, extensive calcareous deposit of a very extensive nature, may exist without impairment of hearing. The history of cases in which there have been such deposits, with diminution of hearing, shows that the patients have at some previous period suffered from inflammation within the tympanic cavity, so that the changes then wrought will sufficiently account for the failure in hearing. That the position of the obstacle to hearing is in the conducting media, and, therefore, in the tympanic cavity, and not in the nervous structure, can be in such cases readily demonstrated by experiments with the tuning-fork. Loss

of continuity in the tympanic membrane, he also shows, does not necessarily interfere with its function, provided that the ligamentous support which it affords to the chain of ossicles is not impaired. In several instances in which the membrane has been accidentally pierced with a very sharp-pointed object, as a pin, the hearing has not been found, with the most careful tests, to be injured. In these examples the healing process occupied from three to four days. In one case, when a sudden explosion near the ear ruptured the membrane in two places, the hearing was perfect, and the ruptures healed in a few days. On comparing the notes of other cases in which the hearing was impaired by explosions, it was found that the hearing suffered more injury when the membrane was not ruptured than when it was. It would almost seem from this that the force of the explosion expended itself partially in rupturing the membrane, and so, in a measure, some hearing was saved. At any rate, the author says, it appears to be not an unfair conclusion that the loss of hearing must be due, in all cases, to damage to the nervous structures; in other words, to what, for want of a more accurate term, must be called shock. That loss of continuity in the tympanic membrane does not of itself interfere with its functions is still further shown by the careful and continual observation of cases in which the membrane is perforated by incision or by disease, and the author thinks that the loss of hearing is due to causes which do not include this loss of continuity in the tympanic membrane.

Chronic Hyperplasia of the Oral Mucosa, with Cornification of its Epithelium.—Dr. P. F. Harvey, U.S.A., in the number of *The American Journal of the Medical Sciences* for July, 1886, describes very fully our present knowledge of the clinical history and pathological anatomy of this rare affection, reporting five cases. The cure of any well-marked case is doubtful, but the writer's experience and study lead him to believe that the following method is best adapted to secure that end: Idiopathic and irritative patches, usually expressive of debility, require a restorative regimen and tonic treatment. The use of tobacco in any form should be discontinued as much on account of its general as of its local effects. Alcohol should also be interdicted. All stimulating articles of food, condiments, carbonic acid waters, hot liquids, or solids, etc., must be avoided. General medication should simply be directed toward improving the general health, and topical applications toward keeping the buccal secretions in good condition. Well-marked patches of *leukoplakia* should be treated in the same way, but weak chronic acid solutions may be used in addition. Resort may also be had to the constitutional use of arsenic, at first in tonic doses, but afterward, if necessary and not contraindicated, carried to the point of toleration. The drug, if resort be had to it, must be thoroughly diluted. Weak alkaline washes should occasionally be used once or twice daily, and it is important to persevere in the soothing and restorative plan of treatment for years, if necessary. Ichthyosis of the tongue seems to occur in perfectly healthy and robust men, and in its treatment the question of vital repair may not be one of so much importance. If the patch is not too thick, it may be first brushed with chromic acid solution (1 to 8); or if not likely to be benefited by that application, it may be curetted when clearly diagnosed. It should, in any case, be entirely removed by the galvano-cautery, the sharp spoon, or the knife, if necessary; for, otherwise, the author says, its transformation into cancer is only a question of time.

Serous Poliorrhomenitis.—Under this awkward name Cantani describes the case of a man forty-seven years of age, who had been previously healthy, except for malarial fever and some ulcerations of probably venereal origin. He lived in a dry locality, but was much exposed by his occupation to cold and dampness, and had been addicted to venery and the abuse of alcoholic liquors. Five years before the patient began to be troubled with severe pains in the epigastrium, and he soon noticed a swelling in the abdomen, and, later, enlargement of the lower extremities. There had never been any œdema of the face, or pain in the kidneys, or disturbance of micturition. Examination showed ascites and effusion in the pleural cavities. The spleen was somewhat enlarged, but the heart-sounds were normal, and the liver and kidneys were not diseased. No cause for the trouble could be discovered. Some micro-organisms were found in the fluid, but it was impossible to learn from their appearance the nature of the affection. Some benefit was derived from the exhibition of adonis vernalis.

The Treatment of Gleet.—In an address before the Medical Society of the County of Albany, Dr. O. D. Ball described a method of treatment employed by him successfully in a number of cases of chronic specific urethritis (*Albany Medical Annals*, June, 1886). He employs an ointment composed of oxide of zinc, three drachms; lard, three drachms; simple cerate, two drachms. The application is made by means of an olive-pointed bougie. The constricted portion of the bougie is filled out evenly and as smoothly as possible with the full calibre of the instrument. The bougie should be carried down to the prostatic portion of the urethra as rapidly as possible, and then, after being rotated in both directions, slightly withdrawn and pushed back again, in the hope that some of the ointment will be forced into the swollen mouths of the seminal and prostatic ducts. In the same manner the remaining portion of the urethra should be treated, giving plenty of time for the ointment to be melted and left in contact with the diseased membrane. The patient should have emptied his bladder previous to the application, and should be instructed to refrain from doing so again as long as possible. The applications should be made at least twice a day—in the morning and the last thing before retiring. The instrument should not be too large, but of just sufficient size to smooth out the folds of mucous membrane. For instance, when the penis measures three and a half inches in circumference, a No. 20 French will about answer the purpose. The average time of treatment of all the cases was a little over four weeks. The longest any one case was under treatment was eight weeks; the shortest was ten days, except in one case where the patient never saw any discharge after the first application was made.

Congenital Malformation of the Intestines.—Dr. Owen Pritchard reports the following case in *The Lancet* of May 15, 1886: The child (a female) looked quite healthy at birth, except that the abdomen was unusually distended, and on his visit in the evening the nurse drew Dr. Pritchard's attention to the large size of the abdomen, and stated that the child had been very sick. A teaspoonful of castor-oil was ordered, but at the next visit it was found that it had not operated, and that the sickness was getting much worse, the vomit becoming black and offensive. An injection was tried, but it succeeded in bringing away only a few very small lumps of fæces. The vomiting became more and more severe, and the child died at the end of a little over four days. At the post-mortem examination the stomach was found normal, and the small intestine for about three feet was also normal, but here it ended in a blind extremity which was greatly distended. Then, quite separate from all this, and not attached to it in any way, were coils of very small intestine several feet in length, and not measuring more than a sixth or an eighth of an inch in diameter. This passed on into the right iliac fossa, and there forming the ileo-cæcal valve, it continued in the course of the large intestine on to the rectum, its diameter in any part of its course not measuring more than a sixth of an inch.

A Remedy for Coryza.—Muriate of cocaine two grains, roasted coffee and white sugar of each one ounce. To be taken as snuff.—*Medical Press.*

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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A NEW "SYSTEM" OF GASTRIC THERAPEUTICS.

ONE may well listen with respect to the teachings of a physician who has cured over one hundred cases of gastric ulcer. This is what Professor Leube, of Germany, claims to have done (*Bull. Gén. de Thérap.*, January 30, 1886). Professor Leube is a specialist in the department of gastro-enteric pathology. He preaches a gospel of which the three chief points are the need of accurate diagnosis, strict regimen, and copious use of the stomachal siphon. Professor Leube is one of those who have introduced a system into practice, based, like all systems, on the belief that its adoption will cure most cases of the diseases for which it is intended. Already there are establishments in Germany instituted with the sole object of treating gastric disorders according to the *régimes de Leube.*

Professor Leube has had an excellent training in physiological and chemical science, and having devoted himself largely for fifteen years to the subject of digestive disorders, it is not surprising that he should have evolved a "system" that merits some attention.

The therapeutic principles upon which Professor Leube depends are four in number: 1, Dietary regulations; 2, the use of the stomach-tube; 3, the use of hydrochloric acid and pepsin; 4, the use of various other drugs, such as powders, bitters, etc.

Preliminary to all treatment it is considered absolutely essential to make a correct diagnosis of the form of gastric trouble. To facilitate this the stomach-tube is used, and seven hours after a meal that organ is washed out. If there remain any food at this time, it is an evidence of digestive trouble. By using various foods, and then subjecting the stomach to the seven-hour test, a list of most digestible substances is obtained. On the basis of many such experiments Leube constructs his different regimens. They are as follows:

Regimen I. Soup (*bouillon*), meat-juice, milk, raw and soft-boiled eggs, unsweetened crackers, and mineral waters. The digestibility of meat solution as compared with light foods, such as calves' brains, rice, and chicken, was shown by many clinical examples as well as by experiments. A few patients, however, through some idiosyncrasy, cannot digest milk or eggs.

The diet above given is suitable for chronic catarrh and gastric ulcer. After it has been persevered in for about ten days, Regimen II. is introduced; this consists of boiled calves' brains, boiled sweetbreads, boiled chicken, and boiled pigeon. They are digestible in the order given. The chickens must be young and the skin must not be eaten. Well-boiled soups were also permitted, and for the evening repast soups, with milk, tapioca, beaten eggs, and calves' feet. This regimen, to which may also be added Regimen I., gives a considerable variety. Treatment may be commenced with Regimen II. if the stomach-washings show the inutility of the first. The patient should live upon these regimens for several weeks, or until his digestive powers will take care of them easily. Then he enters upon Regimen III.

Regimen III. This consists of Regimen II. with the addition of raw or very rare beefsteak. The best way of preparing it is to scrape as much meat from the raw steak as can be removed easily, and heat it up rapidly in a small quantity of fresh butter. Raw ham scraped and cooked in the same manner is also good, strange as it may appear. The ham must be tender. A small amount of mashed potato is allowed, a little bread (not too fresh), and small quantities of tea or coffee with milk.

Regimen IV. Roast chicken, pigeon, venison, partridge, hare, rare roast-beef (it is best cold), leg of veal, small fishes, maccaroni, and soup, with milk and rice; a small amount of butter in some cases. Later on a small quantity of Bordeaux or Rhine wine may be used, but cautiously. Great variety in diet should not be adopted too rapidly.

The number of meals *per diem* and the quantity of food ingested must be carefully regulated with reference to the seven-hour rule, and the conditions and peculiarities of patients. Leube finds that at the catamenial period digestion is considerably retarded. It should consequently be aided, or a longer time be allowed for it, and the food should be plain and simple.

Regimen IV. should be continued for several weeks, and, if necessary, for months; its conditions should be rigorously adhered to. When it is decided that the patient may return to his habitual diet he is directed to make the change very slowly and to keep himself informed as to his digestive ability by the use of the washing-out tube in all doubtful questions.

The only stomach affection in which dietetics play a secondary part is that which Leube describes as nervous dyspepsia. Patients will, however, do better, even in that malady, to adopt a definite dietary. Regimen IV. is recommended, and variety is advised in the use of it for such cases. Condiments may be used if needed, and hydrochloric acid with pepsin. It should be remembered that in treating nervous dyspepsia moral dietetics (*la dietetique morale*) has a preponderating influence.

Leube attaches considerable importance to giving the stomach certain periods of complete repose. For instance, he will wash out the stomach seven hours after luncheon, and give no more food until ten o'clock on the following day. At this time, soup and beef-steak are given, and, generally, a stomach-washing in the evening will show that the meal has been digested.

The drugs most used are hydrochloric acid and pepsin, bitters, cundurango, and mineral waters. The acid and pepsin are not given in nervous dyspepsia or in cancer

or ulcer. Bitters, including cundurango, are not thought much of, though the drug mentioned is one of the best. Mineral waters are prescribed in very moderate amounts (O ss. daily) and are to be taken slowly upon an empty stomach.

RAYNAUD'S DISEASE.

In The Medical Record of January, 1885, we referred to the articles of Petit and Verneuil upon "Symmetrical Dry Gangrene." The subject was also discussed editorially and elicited a number of contributions. Giovani, an Italian physician, and Bouveret, of Lyons, France (Medical Record, November 14, 1885), reported further illustrations of this affection. Dr. C. L. Dana, in an article on the "Acro-Neuroses" (Medical Record, July 18, 1885), discussed the same subject under the head of "Raynaud's Disease," a local syncope and symmetrical gangrene of the extremities, a history and bibliography of the affection being given, and several cases of the milder type reported. These various articles have excited considerable interest in an affection which is not particularly rare in its slighter forms, but which has not been generally recognized as a disorder of a distinct clinical type. In the *Philadelphia Medical Times* of May 29, 1886, Dr. J. H. Musser reports a classical case, and discusses the history of the disease in an instructive manner. In 1862 M. Raynaud gave a description of the disease to which his name is given, and which he described as a symmetrical local syncope and asphyxia of the extremities, ending sometimes in gangrene. It is characterized by paroxysmal attacks, in which the fingers, toes, and even the tip of the nose, the ears, and tongue become white, bloodless, and feel cold and dead. When the fingers alone are affected the trouble is called *digiti mortui*. In severe cases after a time trophic changes occur, and a slow, dry gangrene sets in. In most cases, even of the mild type, some sensory troubles, such as numbness, prickling, burning, or neuralgic pains are felt.

The gangrene is generally of a slight amount, although sometimes the fingers may have to be amputated.

The disease occurs oftener in women, and in persons between the ages of eighteen and thirty. Chronic uræmic poisoning and chronic malarial poisoning often produce symptoms closely resembling Raynaud's disease, and the malarial infection may even cause a gangrene, according to Petit and Verneuil. The milder forms of *digiti mortui* occur in the paroxysms of hysteria and in neurasthenia.

Raynaud's disease shows some curious alliances. For example, local asphyxia of the extremities is one of the most marked features in one of the types of scleroderma. Dr. Barlow had a case in which the paroxysms of local asphyxia alternated with paroxysms of hæmaturia. Dr. Hutchinson cites a case in which iridoplegia was associated with local syncope, asphyxia, and gangrene of the ears. In a case reported by Weiss the patient had attacks of temporary aphasia, and in a case of Southey's there was an involvement of one of the joints. Various skin disorders, such as urticaria, erythema nodosum, and eczema may alternate with or accompany the disorder.

The morbid anatomy of this disease is unknown. No definite organic changes have been found in the central or peripheral nervous system. It can only be supposed that the vascular neuro-mechanism is in an unstable and over-irritable condition. The result is, that there are paroxysmal contractions of the blood-vessels of the extremities. It is a kind of epilepsy of the sympathetic.

Bearing in mind that uræmia, malaria, syphilis, hysteria, and neurasthenia are often present in this disease, treatment must be directed accordingly. Raynaud speaks highly of the value of the galvanic current. Nitro-glycerine and tonics are also indicated.

AN INFINITESIMAL ORGANISM.

In order to give the student of micro-organisms an idea of the extent to which such a path of research may lead him, there should be set before him the investigations recently made by Rev. Dr. Dallinger, president of the English Microscopical Society, as disclosed in a lecture entitled "The Latest Work among the Least and Lowest Forms of Life," given by him at the Firth College, Sheffield, England. In it he described the result of three years' close study with the minutest forms of life. He stated that he has now microscopic lenses which only five years ago were declared by mathematicians to be impossible of accomplishment. By means of these he demonstrated to his audience shells in a piece of chalk of which it would take four million to make an ounce. In a drop of water he could show a desmid which measured only one millionth of a cubic inch; but this was a giant compared to the smallest organism known, of which within the last few months he has made the discovery and found that the flagellum or motor fibre of this infinitesimal entity is two hundred and four millionth seven hundred thousandth of an English inch. One is awe-struck at such a discovery as this, and it is a question as to which should incite an admiring amazement the most, the minuteness of the organism or the mighty mind that can comprehend it and mathematically demonstrate it. Such a great discovery as this, the smallest known organism, will settle any restless feeling of a scientific Alexander, if such can exist, by showing him that he need not for a long time to come sigh for new worlds to conquer.

MEDICINE IN THE FUTURE.

The late Dr. Austin Flint[1] was appointed to read a paper before the British Medical Association at its meeting in 1886. The manuscript was prepared, but the hand which wrote it is at rest, and the voice which was to have pronounced it is hushed. To those who now read it, the last writing from a busy and powerful pen, it comes with the force of farewell words.

"The meditations of a medical practitioner," he says, "whose retrospections extend over half a century, may naturally be expected to revert to the past." . . . "If our retrospections extend over half a century it is worth while to inquire, How will the present appear in a retrospective view at the end of the next fifty years?" From such a mountain of observation he looked forward as well as backward, and predicted that the history of medicine will have a steady acceleration in progress; that knowledge with reference to anatomy, histology, and

[1] Medicine in the Future, by Austin Flint, Sr., M.D. Published by D. Appleton & Company. 1886.

chemistry will advance; that our senses will be aided and augmented; that hearing will be vastly improved by means of microphonic stethoscopes; that a judicious blood-letting will be revived, and the lancet will again find a place which it lost through over-use; that bacterial etiology will be established and revolutionize the treatment of certain diseases; that the little understood functions of spleen and liver, the thyroid body, the lymphatic glands, the supra-renal capsules offer problems which will form "a vast and fruitful field for future clinical researches."

The paper closes with a word in regard to the medical press, the teachings of text-books and colleges, and the physician of the future is referred to with pleasantry, and that gentleman is gently admonished that if he specializes too much he may bring about a professional demoralization.

The delightfully expressed optimistic views would greatly cheer one inclined to regard the future of medicine gloomily; but there are few such. It is none the less pleasant to have hopes confirmed by a horoscope so skilfully cast.

THE SUPERFICIAL AREA OF THE AIR-CELLS.

THE respiratory organs of mammals present a remarkable example of nature's skill in adapting a mechanism to a special use. The animal system, above all things, must absorb oxygen and must do it very actively. Every day about twelve thousand quarts of air must be laboriously sucked into the human lungs in order to furnish the tissue with its indispensable gas. Nature kindly provides that this be done automatically with very little conscious effort. In order to allow opportunity for the oxygen and blood to mingle, the lungs are made practically to consist of an enormous superficial area of thin, flattened cells with an extremely rich plexus of blood-vessels on the under surface. The total number of pulmonary air-cells has been estimated to be one thousand seven hundred millions, and the actual surface they present to the inhaled air was estimated by Kuess to be two hundred square meters. Recently, Marc See (*Bulletin de l'Acad. de Méd.*) has reported estimates which give a different result. The total area, he says, is about fifty-four times that of the cutaneous surface of the body, or eighty-one square meters. The plexus of vessels on the other side of this surface is so rich as to form almost a completely closed surface of blood, the total area being about one-fourth less than that of the epithelial surface. By a peculiar arrangement the blood in these capillaries travels more rapidly than in the systemic capillaries, and is less subject to variations due to nervous influence. The whole blood of the body surges through these passages three times every minute, and in the twenty-four hours about twenty thousand litres of blood are passed through the respiratory organs and brought in contact with the air.

THE EDITOR OF THE BRITISH MEDICAL JOURNAL, Mr. Ernest Hart, was urgently pressed to contest a seat for Parliament as a Gladstonian Liberal. We regret to learn that his health was such that he was positively forbidden to undertake the contest.

News of the Week.

DR. DANIEL LEWIS.—At the Semi-centennial Commencement of the Alfred University, New York, the degree of Ph.D. was conferred on our distinguished townsman, Dr. Daniel Lewis.

COCAINE IN GYNECOLOGY.—By some oversight the proof of Dr. Johnston's article did not reach him in time, and consequently he lost the opportunity of making some corrections in the same.

MORE ABOUT THE SWINDLING "DOCTOR."—We have received several letters from prominent medical men in this city complaining that they have been duped by the swindler who was exposed in our issue of July 10th. They have, however, only themselves to blame. The moral is, "Never trust a stranger when he wants to borrow money." Any man away from home can get money by telegraphing to his friends there. The law of accidents usually provides against the simultaneously disastrous concatenation of circumstances of "a sick wife, starving child, unpaid board, the cashing of a check after banking hours, and the hurry to catch the last train homeward!"

UNWISE FRIENDS often do a cause more harm than violent enemies. What could be more foolish than the following remarks of one Dr. Anna Kingsford: Dr. Kingsford "proceeded to give her reasons for thinking that the work of M. Pasteur would eventually give the death-blow to vaccination, and open the eyes of the people of Europe to this abominable theory of attempting to cure disease by means of disease. So far from supporting vaccination by his theory, M. Pasteur was doing his utmost to put an end to it, and for that, though he knew it not, she thanked him."

DR. THOMAS R. FRENCH, of Brooklyn, has been appointed to the full Professorship of Laryngology in the Long Island College Hospital.

THE AMERICAN RHINOLOGICAL ASSOCIATION will hold its fourth annual meeting at St. Louis, Mo., on October 6th next.

MEETINGS OF NATIONAL ASSOCIATIONS.—During the past week the American Neurological Association held its annual meeting at Long Branch, and the American Ophthalmological and Otological Associations met at New London.

DR. JOHN C. DALTON received the degree of LL.D. from Princeton College at its last commencement.

A NIGHT PHARMACEUTICAL SERVICE.—The Municipal Council of Paris has established a night pharmaceutical service. Poor patients after applying to the police station for a night-service doctor get a prescription and go to a night service druggist.

FAILURE OF HYPNOTISM IN LABOR.—Dr. Porak (*Nouv. Arch. d'Obst. and Gyn.*) reports another case in which a hysterical woman was hypnotized at intervals during her labor. In the later stages, however, when the pains became very severe, it was found impossible to put her in a hypnotic sleep.

SURGEON-GENERAL ROBERT MURRAY, of the United States Army, will be sixty-two years of age in August of the present year, when he will be placed on the retired list.

A POST-GRADUATE SCHOOL is to be organized in Edinburgh, and another, possibly, in Glasgow.

SIMS MEMORIAL FUND.—The following additional subscriptions have been received since our last acknowledgment: Æsculapian Society of the Wabash Valley, Ill., $20; R. Ludlam, M.D., Chicago, Ill., $10; D. S. Smith, M.D., Chicago, Ill., $10; Central Kentucky Medical Association, $5; J. S. Crane, M.D., New York, $5.

PERHAPS A NEW DISEASE?—A daily paper announces the death of G—— S—— from "acute thesis."

IMPROVIDENT MEDICAL MEN.—Our London correspondent, in speaking of the approaching jubilee banquet of the "British Medical Benevolent Fund," draws attention to the lamentable lack of providence exhibited by too many medical men. The warning is needed. The poor parish doctor who dies and leaves his family destitute is to be pitied. But what shall be said of eminent men in consulting practice who do the same? Yet, within the last few years, two distinguished London physicians have done so. They both lived at the West End and kept up expensive establishments, of which, at their decease, their widows were only too glad to dispose. Their families were, to say the least, left very badly off, and in one case a fund was started for their benefit. Neither of these physicians could perhaps have anticipated his untimely death, as both were men of good physique and robust health, and both had only attained early middle age.

One of the best known medical benevolent organizations is the "British Medical Benevolent Fund," which has for its president the late President of the Royal College of Physicians, Sir George Burrows, Bart. It is just completing its fiftieth year. It affords pecuniary relief to distressed medical men, and their widows or orphans. It also grants annuities to the aged or disabled among them. The extent of its operations may be judged of from the fact that in these various ways it disburses annually about £3,000.

Another very useful body is the "Society for the Relief of Widows and Orphans of Medical Men." Sir George Burrows is also the president of this society. Unlike the "British Medical Benevolent Fund," its benefits are restricted to its own subscribers. It is at once a provident and a benevolent society. Subscribers of two guineas a year are eligible for election as members, and having become such the continuance of this small yearly subscription entitles their families to participate in the benefits of the society at their death, should they unfortunately be left needy. It differs from a system of assurance because the benefits of the society are only conferred upon the indigent. The annual sum distributed is nearly as great as that paid away by the "British Medical Benevolent Fund." The society was founded in 1788, and is thus approaching its centenary. Since its foundation it has distributed a sum considerably over £100,000.

No inconsiderable amount of benevolence is also exercised by the "Royal Medical Benevolent College, Epsom." This was founded in 1831. It provides an asylum and pensions for duly qualified medical men (and their widows) who are in reduced circumstances, and a school for the sons of medical men. There are fifty pensioners, each of whom receives £21 a year. Pensioners must be medical men (or their widows), who are not less than sixty years of age, and whose annual income does not exceed £60. Of the fifty pensioners, twenty-four are resident, and each one is provided with three furnished rooms and an allowance of coal; the rest are non-resident. The school receives fifty foundation scholars, the sons of medical men, who are educated and entirely maintained at the cost of the institution. One hundred and seventy paying scholars are also received. The school is an excellent one, and the science teaching especially good. Many of the science "scholars" and "exhibitioners" at the various hospitals come from Epsom College, and owe much of their success to the careful instruction there received. The annual meeting of this excellent institution was held last week, and was presided over by Sir Joseph Fayrer, who spoke warmly in favor of the institution. Sir Joseph Fayrer is a distinguished retired Indian medical officer. His name will be imperishably associated with the history of the Indian Mutiny, he having been Residency Surgeon at Lucknow during the siege.

Reports of Societies.

THE AMERICAN OTOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at the Pequot House, New London, Conn., July 20, 1886.

THE Society was called to order by the President, DR. J. S. PROUT, of Brooklyn.

DR. S. SEXTON, of New York, read the first paper, which was entitled

ACUTE AND CHRONIC PURULENT INFLAMMATIONS OF THE MIDDLE-EAR TRACT AND THEIR COMPLICATIONS.

It was based on the records of over two thousand cases, which were divisible into three classes: acute purulent inflammation of the middle-ear, acute catarrhal inflammation of the middle-ear, and chronic purulent inflammation. The consideration of acute catarrhal inflammation was included in that of acute purulent inflammation, since in the beginning the conditions were probably the same, although not always going on to suppuration. Out of this series of cases one hundred and thirty-one were selected on account of their gravity. Of this number there were twelve deaths.

In no disease is a knowledge of regional anatomy more important than in those of the middle-ear.

He then gave a *résumé* of the anatomy of the temporal bone.

The symptoms were next referred to. Brain symptoms, such as headache, vertigo, pain, delirium, nausea, and vomiting may occur in consequence of middle-ear disease without lesion of the cerebral structure.

The prognosis of purulent inflammation of the middle-ear is favorable when suitable treatment is adopted, both as regards life and the preservation of hearing. Out of twenty thousand cases of ear disease, where the patient has been seen at the beginning of the attack, no fatal case has occurred.

In regard to treatment the speaker recommended incision of the drum head. Trephining of the mastoid

process has been recommended by some authorities. Dr. Sexton took up a consideration of the indications which have been regarded as calling for the application of the trephine, and held that they were insufficient. From his experience he was led to believe that drainage could be best maintained through the natural channel.

The speaker also described

A NEW OPERATION FOR THE RADICAL CURE OF CHRONIC PURULENT INFLAMMATION OF THE MIDDLE-EAR TRACT.

Since describing a form of chronic purulent inflammation of the attic, in a paper read before the Society last year, it had occurred to him that something might be done with these cases by means of an operation. It seems especially desirable to cure these cases when the ear remains simply a reservoir for purulent matter liable at all times to infect the system. It is found that in the greater number of these cases the remaining portion of the conducting mechanism no longer serves to aid in the transmission of sound, but acts rather as an obstruction to drainage. Where the membrana flaccida and a portion of the ossicular chain only remain, the former often becomes thickened and everted, forming with the altered mucous membrane a pouch for the retention of putrescent matters which may slowly escape. Where granulation tissue or polypoid growths are present in the attic or antrum, the escape of secretions is still further interfered with. This produces long-continued and great irritation.

The author had observed that in a number of cases where the transmitting mechanism had been lost a spontaneous cure followed, and it occurred to him that the curative action of nature might be imitated with advantage. Where drainage from the attic and antrum is interrupted, a cure can only be assured by an operation permanently clearing the passage outward from the tympanum.

Last year the operation was tried on a long-standing case of otorrhœa due to chronic purulent inflammation of the attic. In order to avoid the danger of using an ordinary lamp in connection with the administration of ether, an electric light was used. The operation has since then been fully performed in several cases.

The first step of the procedure is to separate the membrana flaccida from the edge of the auditory plate and to remove any portion of the membrana vibrans adherent to the auditory ring. If the malleus and incus remain *in situ* it is well to divide the tendon of the tensor tympani muscle, when present, where it leaves the handle just behind the short process and below the chorda tympani. The chorda tympani when remaining is then divided where it enters the tympanum at the pyramid and also at its exit into the canal of Huguier. The long process of the malleus, being also received into the glenoid fissure by means of this short oblique canal, along with the chorda, may be more or less detached at the same time. The detached tissues and ossicles should now be removed with the forceps. It will frequently be found that the incus, having been displaced, still remains. It may be removed with the attic scraper, which is to be introduced from below and passed up along the inner wall of the tympanum, when the distal extremity may be carried over the incus or malleus, if the latter bone remains, and by traction the ossicles can be detached. Polypoid masses, granulation tissue, and the products of inflammation may now be removed with the cutting curette or cutting forceps, and the parts dressed with a four per cent. solution of cocaine to relieve pain. There is usually free bleeding during the operation, often sufficient to protract it and increase its difficulties.

The effect of injury or destruction of the chorda tympani nearly always manifests itself in some way, but had never in his experience been a matter of serious import. Disturbances of taste sometimes follow the operation, but they gradually disappear and leave the sense of taste unaffected.

The drum should be kept well cleansed, and light dressings of boracic acid applied until healing takes place. The salicylic acid powder may be applied as freely as can be borne. In some cases this is irritating at first, but tolerance is soon established. It may, then, be kept up until the parts cease to discharge.

In the cure resulting from this treatment, a dermic transformation of the tympanum takes place, but mucus may occasionally gain admission from the Eustachian tube during recurrent head catarrh or on blowing the nose. This should be frequently removed with cotton-wool, and, if necessary, the drying applications renewed for a time.

Where the incuso-stapedial connection remained he would not hesitate to perform this operation, unless a very considerable portion of the membrana vibrans was present.

The instruments employed, and some of the diseased ossicles removed, were exhibited. A number of photographs were shown.

DR. AGNEW thought that, where the inflammation involves the mastoid cells, some portion of the external wall of the mastoid should be removed. The trephine does not expose a sufficient area of the cancellated tissue of the mastoid. He did not see how the new operation which had been described would be of service in these cases.

DR. SEXTON remarked that the new operation was recommended only in chronic cases.

DR. H. KNAPP, of New York, said the upper tympanic pneumatic cells resemble to a certain degree the frontal sinuses. These have a direct natural drainage through the infundibulum into the nose. When this is closed by disease, the lateral part of the sinus over the orbit dilates, and the cavity is more easily reached, and more effective drainage is obtained by opening the sinus from the orbit. In a like manner we obtain in most cases easier and more effective drainage of the supra-tympanic cells by opening the mastoid cells with which they communicate.

The next paper was by DR. A. H. BUCK, of New York, on

PAINLESS AND ONLY SLIGHTLY PAINFUL ULCERATION OF THE MEMBRANA TYMPANI, PROBABLY OF A TUBERCULAR NATURE.

The speaker stated that the recognition of the early stages of tubercular disease of the drum-membrane was important, and the object of the paper was to call attention to the features by which this could be recognized. Three cases had been seen by the author, and were described.

Tinnitus and slight impairment of hearing were the first symptoms noticed. In two of the cases, which were examined at an early period, there was slight redness and swelling at the upper part of the membrana tympani and of the skin covering the bony wall. In a short time the infiltration extended into the entire posterior superior quadrant. The membrane became bulging, and at the most prominent point a perforation established itself.

In the incipient stage the distinguishing features are the tendency to localization in the upper posterior portion of the membrana tympani, the marked insignificance of the pain or even its entire absence, and the intolerance to all but the simplest local measures.

DR. SEXTON stated that he had seen many cases of catarrhal inflammation of the middle ear in phthisical subjects. The tendency of the structures of the ear to break down in advanced phthisis is very great.

DR. E. GRUENING, of New York, had seen a number of cases in which he was led to infer that the ulceration of the drum-head was due to tuberculosis. In one case, that of a young man, only one ear was affected. There was very little purulent discharge. There were two openings showing that this was not the result of perforation from accumulation. It appeared to be a melting down process. In another case, there were multiple openings.

These were in the membrana tympani proper. These cases improved under treatment, but the openings remained.

Dr. C. R. Agnew had seen a number of cases in which he considered the origin tuberculosis. In a considerable number of these cases the main lesion has been in the drum-head below the extremity of the handle of the malleus. He described the case of a young man who had phthisis at the apices of both lungs, and who, after a short period of tinnitus, found that he whistled through his ear. In the ear complained of an opening, looking as though it had been removed by a punch, was found. Within a few days the same thing occurred in the other ear.

Dr. J. A. Andrews, of New York, had examined a large number of cases, and some with a great deal of care, but had never found the bacillus. Twice in cases of advanced tuberculosis he had seen, on examining the drum-membrane, little white, glistening points, about the size of a pin-head, not secreting at all, and in one case with no congestion. In both cases the spots disappeared in a few days, and within twenty-four hours there was a little, clean punched-out opening in the drum-membrane. This occurred without any discharge. It seemed to him that he was dealing with isolated tubercles in the tissue of the drum-membrane. One of these cases died a few months later from the general disease.

Certain Technical Details Relating to Operations on the Mastoid Process.

Dr. A. H. Buck, of New York, read a paper with the above title. He referred to the objections which had been made to the drill. It has been stated that there is danger of plunging the drill into the lateral sinus or even into the brain. He had, however, found no tendency for the drill to go astray. It had been said that the opening made was too small, but any sized drill might be made. He used a drill one-fourth of an inch in diameter until the antrum was reached, and finished the operation with a smaller drill. This gives a sufficient opening for drainage. Where there is a large sequestrum it is necessary to make a larger opening.

After the use of the drill pyæmia and septic fever are rare. With a knowledge of the part to be operated upon the drill may be used with perfect safety. It can be guided perfectly by resting the fingers on the bone. The conical shape of the drill also enables the operator to tell when its point has entered a cavity.

The objections to the use of the chisel were next taken up. When this is used the wound in the adjacent soft parts must be larger, and the opening in the bone is more extensive, leading to a depressed cicatrix. More time is required in the operation, and it is not free from danger. These objections are, however, trifling, if the results of the operation are found to be more satisfactory than those following the use of the drill. A study of the statistics of both methods seems to show that there is nothing to warrant the statement that chisels and gouges are to be greatly preferred to drills in establishing openings into the mastoid process.

In operating with the drill, after making the opening, he cuts out a little canal for the escape of the discharges, for the opening made by the drill is covered by the flap when it comes into position. For the first four or five days after the operation the wound is irrigated once a day with a bichloride solution, 1 to 2,000.

Dr. Buck said that in his earlier operations, he applied the drill a short distance in front of the vertical line. His present plan is different. A straight vertical incision, three inches long, is made; by this means he exposed the mastoid process where it curves into the meatus. The drill is then applied to the first flat surface. The only difficulty is in establishing the final communication between the canal and the antrum.

Dr. J. Orne Green advocated the use of the drill. He makes a small opening at first, and is then guided by what he finds. Some cases require a large opening, and in such cases the gouge and chisel will come into play. The dental engine is very applicable in some of these cases. He uses a modification of the engine, which may be screwed to a table, it is turned by a handle, and no skill is required, as in the engine worked with the treadle. Used in this way, I have found the engine of great service. The burrs can be used with the greatest delicacy.

Dr. H. Knapp, of New York, favored the use of the chisel. In his first operations he used a drill, but had abandoned it. With the chisel you can at every step observe the condition of the tissue which you are cutting, and you have a perfectly smooth surface, rendering it easier to cleanse the wound. It is also very easy to manage the chisel.

Dr. H. D. Noyes, of New York, thought that there was much less danger in the use of the chisel than of the drill. There is often great differences in the anatomical relations of the parts. The lateral sinus is not always found in the same place. With the drill there is danger of perforating the wall of the sinus or of some important vein. With the chisel or the gouge you explore the part layer by layer, and ascertain how the parts are situated. This is a strong argument in favor of this instrument.

Dr. J. A. Andrews, of New York, believed that the chisel is the better instrument and can be used with more caution than the drill. He believes that a collection of pus should always be given free vent, and therefore makes a large opening.

Dr. E. Gruening, of New York, had formerly used the drill, and in acute cases the results were all that could be desired. The drill was, however, not applicable to all cases, and he had since used the chisel. A small opening may be made with the chisel. What can be done with the drill can be done with the chisel.

Dr. A. H. Buck, of New York, in closing the discussion, said he was not in antagonism with the chisel in those cases where a large portion of bone is to be removed. He left those out of consideration in his paper. Where a large mass is to be removed, it can not be removed with the drill. The two instruments cannot come into conflict.

A communication with reference to the organization of a

Congress of American Physicians and Surgeons,

was presented and referred to a committee consisting of Dr. C. R. Agnew, Dr. J. H. Knapp, and Dr. John Green, to consider and report at the evening session.

The Morning Session was then adjourned.

Evening Session.

The first paper was on a

Fatal Termination of a Case of Sclerosing Mastoiditis After Chiselling of the Bone,

by Dr. H. Knapp, of New York.

A man, aged fifty, had extensive suppuration in both ears after scarlet fever in childhood. The right ear became totally deaf and the left, very hard of hearing, became deaf (hearing reduced to a quantitative perception of sound) by a recent attack of dizziness. Dr. Knapp found both tympanic membranes absent, the cavities sclerosed in both, pale in the right but congested in the left ear. Behind the left ear was found a cavity fully an inch deep, lined with immovable skin, the result of former exfoliation of bone. Three weeks later facial paralysis on the left side occurred. It disappeared in two weeks under steaming and large doses of iodide of potassium. Two weeks later, the patient suffered with constant intense headache and nausea. The mastoid was opened to the depth of half an inch by chiselling. The bone was

compact and in the depth very vascular. During the first two days the patient was sleepy, could not be aroused on the third, and died comatose on the fifth. No autopsy was allowed. Death was due to traumatic meningitis.

In regard to opening the bone in sclerosing mastoiditis, the prognosis is good when the sclerosis is the result of catarrhal or plastic inflammation, but bad when it is the consequence of old caries or necrosis. There are cases on the border line, and even when the prognosis is bad, the indications may be strong. The operation will rescue a certain number of the otherwise fatal cases.

DR. O. D. POMEROY, of New York, read a paper on

A CASE OF ABSCESS OF THE MASTOID CELLS WHERE THE CHIEF INDICATION FOR OPERATION WAS ELEVATION OF TEMPERATURE.

A. S——, aged twenty, fairly robust, had a violent attack of otitis of the right ear, which came on January 30, 1886. The following morning there was free discharge. On February 1st he entered the hospital, when a large perforation was found; a poultice and warm douches were ordered. By February 4th the membrane looked almost normal. There was some pain in the occiput and a temperature of 103.6° F. Ten grains of quinine with twenty grains of iodide of potassium, to be repeated in three hours, was ordered. This was followed by a reduction of two degrees in the temperature. The following day the temperature again went up, and it was apparent that a purulent process was going on. There was no swelling over the mastoid, and the pain was no greater than might be expected from a neuralgic condition.

After consultation it was decided to open the mastoid process. A drill was introduced, and from four to six drops of pus evacuated. After the operation the patient continued to improve until he was discharged cured.

DR. CHARLES H. BURNETT, of Philadelphia, gave the following account of

TWO CASES OF CHRONIC PURULENT INFLAMMATION OF THE ATTIC OF THE TYMPANUM, WITH PERFORATION OF THE MEMBRANA FLACCIDA, TREATED WITH PEROXIDE OF HYDROGEN.

In the first case no application had had the same good effect as the peroxide of hydrogen. Every other medicament had seemed to irritate rather than heal the inflamed mucous membrane. In the second case the discharge, which had been very chronic, was promptly checked by the use of the peroxide of hydrogen.

The chemical formula of this drug is H_2O_2, and by its affinity for albuminous matters, especially those of pus, it seeks every particle of this matter in a cavity like the middle ear, and thoroughly cleans the parts. The union with pus is shown by a copious foam, which boils out of the external ear. When the foaming ceases and the peroxide returns clear the diseased cavity has been thoroughly cleansed. In many cases this seems sufficient to effect a cure. Where there is a perforation in the membrana flaccida, the application is made by means of the tympanic syringe, the long and slender nozzle of which is introduced through the perforation at the attic of the tympanum. The peroxide is used undiluted.

A paper with the following title,

IN THE PHYSIOLOGY OF HEARING IS THERE AN OVERLAPPING OF EACH AUDITORY FIELD, THE SAME AS IN BINOCULAR VISION?

was read by DR. WILLIAM S. LITTLE, of Philadelphia.

Cases of one-sided deafness afford the opportunity of mapping out the auditory field for one ear, and it is found, with the watch at two feet from the ear, the tick can be heard about ten or fifteen degrees across the median line of the head. This gives more scope to hear sounds produced on the side of the head opposite the good ear. The tuning-fork is not heard even up to the median line on the side of the ear tested. The watch has been used in making the observations. If the field of one ear reaches beyond the median line to about ten degrees, we have, when both ears are normal, an overlapping of each field to the extent of fully ten degrees on either side of the median line in front, above, and behind the head. Each ear hears sounds in this area of twenty degrees, outside of this area each ear hears singly. By means of this there is no need to turn each ear toward the source of sounds which reach the individual; the direction of sound is best found in this way for safety in walking and maintaining the erect position. Sudden loss of hearing on one side puts the sufferer to great annoyance, as the ability to determine the direction of sounds is in a measure lost, the patient often looking in the wrong place when called. It is fully as perplexing, if not more so, than in a case of sudden loss of sight in one eye, making seeing dependent on one organ of vision.

The attempt to restore hearing should be directed not only to obtain hearing in a line directly in front of the ear, but also to increase the area of hearing in the affected ear or in both affected ears, till it reaches, if possible, the coalescence seen in normal ears.

The literature of the subject of acoution and otology does not give any information on this point; too close a comparison between the eye and the ear cannot be made. The auditory and optic nerves respond to very different media. The auditory nerve has no commissure or decussation of fibres like the optic, and has a less central position in the cerebrum than the auditory.

A paper on "Two Cases of Ear Disease Due to Traumatism," by Dr. Gorham Bacon, of New York, was read by title.

The Society then went into Executive Session.

The proposition with reference to the organization of a Congress of American Physicians and Surgeons was discussed, and a committee of conference was appointed, consisting of Drs. C. R. Agnew, New York; H. Knapp, New York; John Green, St. Louis; W. H. Carmalt, New Haven; and George Strawbridge, Philadelphia.

The officers for the ensuing year are as follows:

President—Dr. J. S. Prout, of Brooklyn.

Vice-President—Dr. Samuel Sexton, of New York.

Secretary and Treasurer—Dr. J. J. B. Vermyne, New Bedford, Mass.

Committee on Membership—Drs. Gorham Bacon, W. S. Little, and E. W. Bartlett.

The following were

ELECTED TO MEMBERSHIP:

Dr. J. B. Emerson, of New York; Dr. J. O. Tansley, of New York; Dr. J. L. Minor, of New York; Dr. Henry L. Morse, of Boston; Dr. Huntington Richards, of New York; and Dr. T. Y. Sutphen, of Newark, N. J.

The Society then adjourned.

PASTEUR'S RECORD.—M. Graucher, Pasteur's assistant, in a recent lecture, said: "Of 1,335 persons who were inoculated to June 21st, he found that of 96 patients who belonged to the first or experimental category—namely, of those in whom the existence of rabies was indisputable—there was only one death, or a mortality of 1.04 per 100, or, in round numbers, 10 per 1,000; and of 644 persons of the second or clinical category, 3 succumbed to rabies, or 0.46 per 100 of the mortality, or 5 per 1,000 in round numbers. In comparing these statistics with those of the department of the Seine, it will be seen that the average mortality from hydrophobia has been reduced from 160 per 1,000 to 7.5 per 1,000. These figures apply only to those bitten by mad dogs. As regards the 48 persons bitten by mad wolves before April 22d, there were 4 deaths; but a calculation based upon eight documents communicated to M. Pasteur indicates a mortality of 82 per 100 after the bites of mad wolves. A paper published by Professor Brouardel, in the 'Dictionnaire Encyclopédique des Sciences Médicales,' on rabies, gives a mortality proportion of 67 per 100. Thus it may be seen that the difference between the two results is considerable."

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 12, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. WALTER MENDELSON presented a specimen of

LARGE RETRO-PERITONEAL SARCOMA, WITH SECONDARY DEPOSITS IN THE KIDNEYS AND LIVER.

I. S——, aged fifty-seven years, merchant, single, German. One sister died of cancer. Family history otherwise good. Habits temperate. No syphilis, rheumatism, or gout. Had always enjoyed good health until present illness, for which he consulted me first on February 15, 1886. He then complained of great constipation, almost complete anorexia, insomnia, and very great lassitude and weakness. From his friends Dr. M. learned, later, that for the past two or three months he had been observed to have emaciated and run down generally.

Remedies to relieve the anorexia and constipation were prescribed, and a few days later the patient's urine was examined and was found to contain a trace of albumen and a few hyaline, finely granular, and wavy casts. The quantity passed was, if anything, a little less than normal, and contained three per cent. of urea.

Physical examination of the heart, lungs, and liver gave negative results, and as no abdominal pain or discomfort was complained of, the abdomen received only a cursory examination.

The patient's urine had been analyzed a year previous and found normal.

In view of the results of the present analysis a diagnosis of chronic or subacute diffuse nephritis was made, and treatment of the symptoms on that basis was pursued, under which the patient's general condition improved slightly.

On March 10th microscopical examination of the urinary sediment showed for the first time a large number of red blood-corpuscles. They were neither discolored nor deformed, as blood coming from the kidney is apt to be, and it was thought at the time that a hemorrhage in the urinary passages themselves had occurred, although there was no history of pain, such as the passage of a calculus would produce.

On March 14th the patient first complained of pain over the right ilium, and said that for the past three days he had passed urine "the color of porter." Examination showed considerable cutaneous dysæsthesia at the location just indicated, but no pain on deep pressure. Percussion revealed an ill-defined area of dulness, and deep palpation was met by a marked sense of resistance, but no well-defined tumor could be felt.

As the patient's general strength had been steadily declining he was advised to go to bed, and in the afternoon a specimen of urine for examination was obtained. It was of an opaque, light-reddish-chocolate color, acid, of a specific gravity of 1.022, and contained a large amount of albumen. The sediment consisted of amorphous urates, mingled with great quantities of red blood-corpuscles, all of which were discolored and most of them misshapen. There were also numerous blood-casts, and casts containing rounded masses of a granular, dark-red material, which he took to be free hæmatin resulting from the decomposition of the hæmoglobin of the red corpuscles. There was also much of this material floating free in the urine.

Malignant disease of the kidney being suspected, and the patient feeling very weak, rest in bed was ordered, and on the following day Dr. William H. Draper saw the case in consultation with him. In addition to the ill-defined tumor on the left side, a mass could be felt in the right lumbar region. It was hard, indistinctly movable, and about the shape and size of a kidney, projecting as far forward as the axillary line. Manipulation caused no pain. At the time this mass was thought to be the kidney itself, either enlarged, or displaced by some growth.

A few days later Dr. Sands saw the case, and agreed with the diagnosis of malignant renal tumor which had been made, but advised against any operative interference—very wisely, as the sequel showed.

During the next ten days little change occurred. At first a good deal of dark blood was passed; the urine then became entirely clear again. Although constantly examined, no epithelial elements referable to a neoplasm could be discovered in it.

On March 24th blood suddenly reappeared again in the urine. The hemorrhage must have been very considerable, for long, bright-red clots, eighteen inches and more in length, and about the diameter of a goose-quill, were passed very frequently. They would present themselves at the meatus, and could then be pulled out without breaking.

The question arose: Whence this sudden hemorrhage? At first it seemed, from the length and diameter of the clots, as though they were formed in the ureters, but later he concluded that secondary deposits had occurred in the bladder (though rectal examination proved negative) giving rise to the hemorrhage. The clots, he conceived, were formed by the contracting bladder forcing the jelly-like coagulum collected at its fundus through the urethra, thus moulding the clot into shape, just as lead-pipe is made by forcing the semi-fluid metal by hydraulic pressure through a suitable opening.

As long as the coagulum was only of jelly-like consistency the patient had but little trouble in emptying his bladder, and suffered no pain. As soon, however, as it grew firm, urination became exceedingly painful. Violent tenesmus occurred, and during the act of straining small, firm, grayish-red clots would be expelled with great force, each followed by a gush of urine. Sometimes a change of position was sufficient to cause an occluding mass to roll away, leaving the entrance to the urethra free. The clotted masses expelled were quite firm and partly discolored, being made up often of two or more layers of different colors, from blood deposited at different times. The urine was not ammoniacal. Washing out the bladder had finally to be resorted to, which was rendered rather difficult as, owing to an old stricture, a No. 9 American catheter was the largest that could be introduced. Although antiseptic precautions were used—a solution of mercuric bichloride, 1 to 6,000, was used for injecting—the urine became faintly ammoniacal; a condition, however, which passed away spontaneously when the catheter was no longer necessary, owing to all the old clots having been washed away and no new ones forming.

At this time Dr. L. B. Bangs saw the patient in consultation with him.

On March 30th clear urine was passed again, and the urine remained more or less clear until April 10th, when not more than a drachm was passed during the day. In it were found, for the first time, numerous large, round, and tailed epithelial cells, presumably from some neoplasm. At the same time not the slightest desire to urinate nor feeling of fulness in the bladder existed.

As he could pass a catheter only with difficulty, owing to the tightness of the stricture, he again requested the services of Dr. Bangs, who conclusively demonstrated that the anuria was one of suppression and not retention—at least as far as the bladder was concerned—by injecting water into the bladder and observing that all that went in flowed out again. He found the capacity reduced to from two to three ounces. The patient showed no signs of uræmia, but, on the contrary, seemed at this time brighter than usual.

This condition of anuria lasted until his death, which occurred five days later, during which time not more than about four ounces of dark, bloody urine was passed,

containing many of the large nucleated, granular epithelial cells noted before. All sorts of measures for stimulating the kidneys to action were in the meanwhile tried, since at the time it was thought that the suppression was a functional and not a mechanical one, as autopsy showed it to be.

Already, on the day following the beginning of the anuria, the patient began to complain of great itching of the skin. On the third day he was, at times, a little flighty in his mind, and inclined to doze a great deal; and when awake was very apathetic. Twitching of the limbs also set in and soon became very marked, both during waking and sleeping. By the fourth day following, the apathy had greatly increased and the patient lay with mouth partly open, eyeballs fixed and staring, and limbs twitching in a semi-conscious state; and yet at no time—even up to within an hour of his death—did he absolutely lose consciousness, for on being roused he recognized his friends and seemed perfectly aware of his approaching end.

Autopsy was performed seventeen hours after death. Rigor mortis moderate; emaciation not marked; color of skin yellowish; slight œdema of skin of back. Head was not examined. Heart normal. Lungs showed hepatization from hypostatic congestion to the depth of about one inch on posterior aspects; slight general œdema; small quantity of fluid in each pleural cavity. Abdomen: fat of omentum very yellow. Intestines distended with gas; much fat in mesentery; no enlargement of mesenteric glands. Stomach greatly distended; otherwise normal. Liver not enlarged; contained about half a dozen yellowish-white nodules, varying from size of a pea to a hickory-nut; gall-bladder full. Spleen large, but shrivelled-looking; otherwise normal.

Behind the peritoneum lay a huge cushion-shaped tumor, extending above to within three inches of the diaphragm, below to the brim of the pelvis, and on either side as far as the outer borders of the kidneys. Over the vertebral column this mass was about four inches in thickness, and completely enveloped the aorta (which was very atheromatous) and other large vessels. The surface of this mass was nodulated, and, on cutting into it, several places were found where softening had occurred. He estimated its weight to have been about six to eight pounds.

The kidneys lay partly imbedded in the tumor. Right kidney: On section, bloody urine gushed out with much force as soon as the pelvis was reached, and the ureter was found plugged by a grayish-red coagulum. The pelvis and calices were much dilated and filled with bloody, grumous masses. The parenchyma was thinned, the cortex pale, and in the papillæ there were numerous hemorrhagic, softened, and broken-down areas—evidently degenerated secondary deposits. Left kidney: Same as the right, except that in the upper portion there was a firm white nodule the size of a small pea. The pelvis and calices were dilated, and contained some clear urine. The kidney was removed, together with a large mass of the neoplasm in which it lay imbedded, and on cutting through this mass the ureter was severed, as became evident by a sudden spurt of clear urine, showing that compression of the ureter by the tumor had occurred lower down. The bladder was empty, and was the seat of no pathological alterations.

Microscopical examination of the new growth showed it to consist of a round and spindle-celled sarcoma. The sarcomatous growth had invaded the outer and middle coats of the aorta. The kidneys were in a condition of diffuse nephritis.

The case seemed to present to him the following special points of interest: Large size of the tumor, together with its rapid growth. Confirmation of the original diagnosis by examination of the urinary sediment. Occurrence of what seemed to be suppression of urine, but which was in reality retention, caused by bilateral occlusion of the ureters, from two separate causes, however—the right being plugged by a coagulum, the left being closed by pressure. It might also be noted that, with the exception of the liver and kidneys, the sarcomatous growth was limited to the retroperitoneal lymph-nodes. Not even the mesenteric nodes—as far as could be ascertained—though lying in such close proximity, were involved; a circumstance which might be explained by the fact that the general course of the lymph-current here is in a direction away from the mesenteric toward the retroperitoneal nodes.

DR. PRUDDEN remarked that retroperitoneal tumors were interesting because of the difficulty in classifying them, as it was not always easy to say whether a given specimen should be called sarcoma or carcinoma. He asked Dr. Mendelson as to the condition of the wall of the abdominal aorta.

DR. MENDELSON said that the adventitia and the media were involved, but the intima was unaffected. In the other case mentioned the neoplasm had entered the lumen of the vein, but there was no evidence of metastatic tumors.

DILATATION AND FATTY DEGENERATION OF THE HEART—BLOOD-CHANGES OF PERNICIOUS MALARIAL FEVER.

DR. PUTNAM-JACOBI presented the heart removed from the body of a child, aged five years, who died at the infirmary. The child had been living in a state of great poverty, and the visiting-physician was called to see it on account of a very severe epistaxis. The child when first visited was completely exsanguinated. It was also stated that he had been perfectly well up to two years ago, when he had measles, and from that time on he had not been very well. At three years of age he had scarlet fever, and a few months afterward he had a profuse epistaxis, one which was almost as exhausting as the last, and between these attacks there had been several mild bleedings from the nose. The pulse was 150, and the temperature 101° F. in the rectum. There was evidence also of marked dilatation of the heart, the apex beating at a finger's breadth to the left of the nipple line, and there was a distinct systolic murmur with its maximum intensity at the apex. It had been supposed, and she rather accepted the diagnosis, that there was mitral insufficiency, with some dilatation of the heart in consequence, and that the epistaxis had been that which occurs sometimes with this cardiac lesion, but it was evident at the second visit that this explanation did not satisfy the case. The child did not seem to recover at all, notwithstanding it received a full supply of food and some stimulants. Dr. Jacobi then concluded, without any history of rheumatism and nothing to cause endocarditis except scarlet fever, that the dilatation had developed since the occurrence of the epistaxis, or in consequence of some cause to which the hemorrhage itself was due.

It was a question whether it might not be due to an intense form of malarial poisoning, producing a rapid alteration in the constitution of the blood, accompanied with profuse hemorrhage, as described by Italian writers. The blood was not examined.

Autopsy.—No normal fluid in the pericardium. The heart extended vertically from the first intercostal space to the lower border of the *sixth* rib, and transversely from the right border of the sternum to a line a finger's breadth beyond the left nipple line. Its transverse diameter was 10 ctm.; the left ventricle was markedly dilated; the right to a less degree. A clot extended into the vena cava almost its entire length. There was a certain amount of clot in the mitral valve, and the clot in the right ventricle extended into the pulmonary artery. The muscular tissue of the heart was extremely pale, especially over the right ventricle; that of the left was very much redder. There were broad white patches along the line of the blood-vessels, and there was a patch of fat at the apex of the heart. The endocardium of the left ventricle was streaked with yellowish-white lines, most marked

upon the septum and papillary muscles. In the right ventricle there was dilatation, but no such streaking of the endocardium. The tricuspid valves were normal. There was a very slight roughening about the base of the pulmonary valves.

The *liver* was of normal size, rather pale, and dotted with pale yellowish specks. The *kidneys* were white, the capsule non-adherent, and the lower portion the seat of hypostatic congestion. On section, white bands were found extending down from the cortex to the papillæ. On microscopical examination the mucles of the heart were found to be in the condition of partial fatty degeneration; in no section were all the fibres granular, but lying between normal fibres could be seen four or five in which the striations had disappeared entirely and had been replaced by fine granules. The nuclei of the sarcolemma were stained on the fibres which were preserved, and on some of those in which the striations were lost.

The kidneys also showed a mixture of fatty degeneration with normal tissue, some tubules showing the epithelia normal and others presenting well-marked fatty change. In both liver and kidneys the tissue was considerably infiltrated with red blood-corpuscles.

In connection with the specimens, Dr. Putnam-Jacobi exhibited illustrations of certain bodies formed in the blood, and described by Tommasi-Crudeli, in his article in the first volume of the proceedings of the last International Medical Congress, as belonging to certain forms of malarial fever. In the present case the question arose whether the affection was one of malarial poisoning, described by Crudeli, or was one of hæmophilia.

Dr. Mendelson asked if the aorta was abnormally small.

Dr. Putnam-Jacobi said that such a condition was not noticed.

Dr. Mendelson said that cases had been reported in which the blood-vessels were too small to carry sufficient blood to meet the needs of the body, and in these cases hemorrhages occurred very frequently.

Dr. Putnam-Jacobi said that those were the conditions in cases of pernicious anæmia.

Dr. Mendelson said that they had been noticed without pernicious anæmia, and he referred to the case of a tall, thin young man who was taken ill very suddenly, became unconscious, and died in about ten minutes. Post-mortem revealed hemorrhage into the brain. The aorta was found to be uncommonly small, and all the blood-vessels were proportionately small and thin.

Dr. Putnam-Jacobi said that the effect of such abnormal smallness of the blood-vessels could scarcely be felt during childhood, but it would be during adolescence, when the arteries were elongating and the tension of the arterial system was rising, that the effect of the condition alluded to would be felt first; in the little child it would scarcely have any effect.

Dr Mendelson said that he thought it might be interesting to know whether this might not be a case occurring in a child.

Dr. Prudden then exhibited, under the microscope, a section of brain-tissue which he received from Dr. Councilman, who had described certain indeterminate bodies found in cases of pernicious malarial fever.

Dr. J. Lewis Smith presented a lung with the bronchial glands, just removed from the body of an infant, eight months old, that had had a slight hacking cough for some time. There was no marked acceleration of either respiration or pulse. The temperature was, for a day or two before death, 102¼° F. The autopsy showed

ENLARGED AND CHEESY BRONCHIAL GLANDS.

It was one of those cases, therefore, which might be fairly called *bronchial phthisis*, but there was no softening of the glands. It was the condition which in infants soon terminated in general miliary tuberculosis. Dr. Smith thought that the mistake was frequently made of regarding cases in which enlarged bronchial glands obstructed free return of blood from the brain, and consequently gave rise to an effusion of serum into the ventricles, as cases of tubercular meningitis. In such cases there would be marked cerebral symptoms, but without vomiting, sighing respiration, or elevation of temperature, the condition of affairs he had seen in a case recently.

The specimen was referred to the Committee on Microscopy to be examined for the tubercle bacillus in the enlarged and cheesy bronchial glands.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE OPHTHALMOLOGICAL SOCIETY—INTERSTITIAL KERATITIS IN ACQUIRED SYPHILIS—THE PRESIDENCY OF THE COLLEGE OF SURGEONS—MEDICAL CANDIDATES FOR PARLIAMENT—THE ELECTION OF DIRECT REPRESENTATIVES ON THE MEDICAL COUNCIL—THE COLLECTIONS IN THEATRES FOR THE HOSPITAL SUNDAY FUND.

London, July 9, 1886.

The concluding meeting of the Ophthalmological Society for this season was held on this day week. A number of interesting cases and drawings were exhibited. Dr. Brailey showed drawings from a case of monocular iritis in a child. He considered it to be tubercular in nature, and Mr. Hutchinson remarked that the presence of enlarged cervical glands was in favor of this view. Dr. Brailey also showed a case of interstitial keratitis, which he regarded as tubercular in origin.

Dr. M. J. Symons gave the history of a case in which changes had occurred in both corneæ of a man, aged twenty-nine, who was the subject of acquired syphilis. When he came under treatment there was thinning, bulging, and opacity over limited areas of both corneæ, without any disturbance of the epithelium. The iris was partially adherent in both eyes. The other ocular tissues appeared to be healthy. Iodide of potassium affected but slight improvement. Mr. Hutchinson observed that the corneal changes had occurred in the tertiary period. but he was not certain that they were really due to the syphilis. He asked whether any members had seen corneal changes in acquired syphilis. This inquiry elicited somewhat unexpected testimony. Mr. Nettleship, Mr. McHardy, and Mr. Lang all referred to cases they had seen of interstitial keratitis occurring in patients suffering from acquired syphilis. In one of Mr. Lang's cases the disease occurred twelve years after infection. In response to a query from Dr. Angel Money as to the latest age at which interstitial keratitis of congenital syphilitic origin could occur, Mr. Hutchinson said he had seen several cases as late as thirty-six years of age; Mr. Nettleship mentioned a case he had seen in which the patient was between thirty and forty; and Mr. Adams Frost, one in a woman thirty-nine years of age.

At the conclusion of the meeting, Mr. Hutchinson, in giving up the presidential chair, gave a short valedictory address. He referred to the satisfactory progress which had been made during the three years which have elapsed since he became president. He suggested tobacco amblyopia and amblyopia potatorum as suitable subjects for investigation. Alluding to Mr. Nettleship's case of progressive failure of sight in a woman, without any other symptoms, he asked what was the meaning of this temporary extinction of a special sense? Was it allied to the temporary blindness of megrim? The assumption that such cases were due to retro-ocular neuritis required careful investigation.

The re-election of Mr. Savory as President of the College of Surgeons has come as a surprise to most outside the Council; so has the appointment of two new vice-presidents, viz., Mr. Hutchinson and Sir Joseph Lister. The latter appointments will probably lead the way for a complete abolition of the old vicious rule of election by seniority. Mr. Savory's re-election is the more noteworthy as it is unprecedented. The Presidency of the College of Surgeons has always been an annual office, unlike that of the College of Physicians, where, although the election is annual, the term of office has usually extended to five years, and sometimes to more. Sir William Jenner's re-election for a sixth year was, therefore, although unusual, not wholly without precedent. Mr. Savory's is so, and probably indicates the firm resolve of the College to pursue the policy taken up when the two Colleges agreed to combine for examination purposes, which policy was further emphasized by their jointly undertaking the erection of a hall for examination and other purposes. This hall, of which the Queen laid the foundation-stone early in the year, is now rapidly approaching completion and is already a goodly structure looking down on the Thames.

The election now in progress is not wholly without medical interest. No less a personage than Dr. Balthazar Foster, President of the Council of the British Medical Association, has been defeated at Chester, which he represented in the late Parliament. Dr. Foster's defeat is, doubtless, due to his acceptance of Mr. Gladstone's Home Rule scheme. Dr. Alfred Carpenter has tried another constituency at this election, but is again unsuccessful. Mr. Ernest Hart apparently had enough of the fray last time, and has judged it most prudent not to make a further bid for parliamentary honors. Surgeon-Major Evatt came forward at Woolwich as a Gladstonite, but was rejected. On the other hand, Dr. Farquharson has been successful in retaining his seat in Aberdeenshire in spite of his conversion to Home Rule.

In January next another election will take place—one of much less importance, but still not without interest to our own profession—I mean the election, by the medical practitioners of the three kingdoms, of five gentlemen to represent them in the General Medical Council. Of these direct representatives three are to be elected by the practioners of England and Wales. Conjecture is already busy as to who these are to be.

I find I was a little too liberal in attributing charitable feelings to theatre-goers. The sum raised for the Hospital Sunday Fund by the collecting boxes placed in theatres only amounts to just over a hundred pounds—a very paltry sum, considering what Londoners spend in amusements.

THE AFTER-TREATMENT IN CATARACT AND IRIDECTOMY OPERATIONS.

To the Editor of The Medical Record.

Sir: I clip the following from your journal of July 10, 1886:

"A REVOLUTION IN THE AFTER-TREATMENT OF CATARACT AND IRIDECTOMY OPERATIONS.

"We believe that it is only ophthalmic surgeons who, after operating, submit their patients to the horrors of the dungeon, obliging them, in the language of the contemporaneous drama,

"'To lie in solemn silence in a dark, damp dock.'

But there have now arisen certain gentlemen who have the boldness to decry this practice as unnecessary, and even hurtful. At the St. Louis meeting of the American Medical Association, Dr. Michel advocated the plan of using a light bandage to the eyes after cataract operations and iridectomies, and allowing the patients to be in a lighted room, where friends can come and read to them. Dr. Michel's plan was not favorably received at St. Louis, but it has been tried by Dr. Chisolm, of Baltimore, who reports fourteen cataracts and four iridectomies treated in this way. The method in detail is simply this: After the removal of a cataract or the performance of an iridectomy, the eyes if a cataract, the eye if an iridectomy, is closed in its normal position and a bit of isinglass plaster, about two and a half inches long by one inch wide, is then rendered flaccid by immersion in some germicide fluid and is neatly applied to the surface of the closed lids. When dried this forms a close, firm band. The patient is then allowed the full liberty of his room. In every case thus far operated upon by Dr. Chisolm the results have been uniformly good, and he has consequently abandoned the old method."

In 1869, seventeen years ago, I read a paper before the American Ophthalmological Society, under the title of "A Method of Dressing Eyes after Cataract Extractions and other Ophthalmic Operations requiring Rest by Exclusion of Light." In that paper I argued against heavy bandages, and showed how, in my experience, it was possible to give eyes rest after capital ophthalmic operations, by closing the eyelids with strips of isinglass plaster and a partial black silk mask. In that paper the following statements, among others of like import, were made, viz.: "That it is a clinical desideratum to be able to treat a case of ophthalmic surgery in a well-lighted room without admitting light to the wounded organ." Then speaking further of the method of dressing I say: "Such a dressing makes it easy to surround old and feeble subjects with an atmosphere chemically fitted by direct light for purposes of respiration, and thus to quicken the vital forces and lessen the dangers which spring from delayed or perverted reparative processes. It (light) favors regular and easy care of the patient, and the performance of such offices as may pertain to his comfort or safety. It (light) permits, at proper times, such entertainment as may tend to give pleasant occupation to the mind and banish the apprehension and dread which always exist to a greater or less degree, in the case of those who are served in the dark by groping or stumbling attendants." "There should be fresh air, influenced by the presence of sunlight, for the patient to breathe."

In 1868 the Brooklyn Eye and Ear Hospital was opened. In its wards there was provided as much light as may be found in any general hospital. In 1869 the Manhattan Eye and Ear Hospital was opened in New York. Its wards always have been light and airy.

For more than twenty years the writer has taught in the College of Physicians and Surgeons, and elsewhere, the doctrine of the value of light in the wards of an ophthalmic hospital.

C. R. Agnew, M.D.

ICE-CREAM POISONING—VANILLISM.

To the Editor of The Medical Record.

Sir: In your issue of this date you refer to the numerous cases of ice-cream poisoning which have been recently reported, and notably to the Michigan case, in which one hundred and forty-three persons exhibited symptoms of irritant poisoning from eating ice-cream. The *Evening Post* of the same date contains a report from Charleston, Ill., giving an account of the poisoning of fifty persons from the same cause. In addition to these veritable epidemics of ice-cream poisoning, we hear almost every day of individuals or entire families having been poisoned by eating ice-cream, pies, and other alimentary preparations.

The symptoms in all these cases are essentially the same, viz.: Burning, colicky pains, vomiting, purging, great prostration, sometimes convulsions, rarely, however, terminating fatally. The symptoms are essentially those of acute gastro-intestinal irritation, closely resembling those of cholerine, and suggesting the action of an acrid metallic poison as the exciting cause. It is a note-

worthy fact, however, that the most careful clinical analysis of the offending food has always failed to detect the presence of arsenic, copper, tin, or other metallic poisons. Professor Bartley, chemist of the Brooklyn Board of Health, has suggested that poisoning from eating ice-cream and pastry may be due to the poor grade of gelatine used, and its subsequent rapid decomposition. Professor Vaughan, who has analyzed specimens of the Michigan cream, claims to have solved the etiological mystery by the discovery of a new poison, which he terms tyrotoxicin, and which he asserts is due to the decomposition of milk kept in unclean vessels. The conditions for its generation were, however, not present in the recent New Jersey cases of poisoning, since, according to the testimony, the cans containing the milk and those used in the preparation of the cream had been carefully washed and scoured; besides, the occurrence of numerous cases of poisoning from eating pies, pastries, and simple farinaceous puddings, cooked in porcelain vessels, cannot be explained upon the theory of Professor Vaughan's somewhat hypothetical substance.

It is a matter of surprise to me that in the explanation of these toxic phenomena, a possible, and in my opinion, an exceedingly probable cause, has been entirely overlooked by these observers. I refer to the poisonous properties of the flavoring extract. It is, to say the least, a pertinent and suggestive fact that in all the cases of poisoning above mentioned vanilla has been the flavoring extract employed.

Some time ago, while investigating the incidental effects of drugs upon the skin, I came across a number of references, in French and German literature, to the local irritant action of the vanilla bean upon the skin. Precisely analogous effects are produced upon the mucous membranes, besides a train of neurotic symptoms. These toxic phenomena have been grouped by French authorities under the general term "Vanillism."

In preparing vanilla for market, the vanilla-pods are classified according to their size and quality, the quality depending upon the greater or less abundance of a substance which exudes from the pod and crystallizes upon the surface in the shape of white, frost-like needles. In order to prevent the dissemination of these crystals, the pods are frequently covered with a protective coating of the oil of the cashew nut. Cardol, or the oil of the cashew, is a most powerful irritant, simple contact with the skin causing vesicular, erysipelatous, and other cutaneous eruptions.

The workmen employed in cleaning, picking over, and assorting the vanilla-pods according to their quality, are liable to various toxic accidents, and are often compelled to change their vocation on this account. The irritant effects upon the skin are first manifest in an itching of the hands, face, and other exposed parts. The skin becomes swollen and the seat of an exceedingly pruriginous papular erruption, more or less extended, and which is followed by desquamation. It is often accompanied by blepharitis, coryza, and other signs of irritation of the mucous membranes.

The nervous symptoms are headache, vertigo, lassitude, muscular pains, great prostration, vesical irrifation, and sometimes genesic excitement.

Various theories have been suggested as to the nature of the irritant principle: Schroff attributed the toxic accidents to the cardol with which the pods are coated. Rosenthal thought it was because the pods were gathered when green, as it is well known that the juice of the unripe fruit is an active irritant. According to Paget, a certain class of vanilla-pods, called *Vanilons*, which are of poor quality and entirely unfit for alimentary use, are responsible for these accidents. By others it is claimed that the irritating effects are due to the presence of a particular parasite, an acarus, which infests the pods.

In Europe the vanilla used in flavoring ices, pastries, etc., has been long recognized as a prolific source of poisoning. Over thirty years ago Orfila reported cases of poisoning from eating vanilla ices. Since then numerous cases of similar nature have been reported in Berlin, Vienna, and various cities of Europe. In the endeavor to trace the cause of these toxic accidents, the most elaborate chemical investigation proved the absence of any metallic irritant, and identified the vanilla, used in the flavoring, as the vehicle of the poison.

To this it may be objected that a substitute for the vanilla bean is often used in the manufacture of cheap ice-cream. Artificial "vanillin," as it is termed, is made from coniferin, found in the sap of the pine. In the manufacture of this extract, bichromate of potassium, an extremely irritating substance, is largely employed. It is hardly probable that the process of purification is so perfect as to remove all traces of this agent.

The object of this communication is not to cast discredit upon Professor Vaughan's alleged discovery, but rather to direct the attention of your readers to what I conceive to be the most plausible explanation of the causation of ice-cream poisoning.

PRINCE A. MORROW, M.D.

66 WEST FORTIETH STREET, July 17, 1886.

LAPAROTOMY IN GUNSHOT WOUNDS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of July 10th appears a letter from Dr. Robert Tilley, claiming for Professor C. T. Parkes, of Chicago, priority in showing that laparotomy should be performed in penetrating abdominal wounds.

The experiments of Professor Parkes' work were upon dogs, and under conditions widely differing from those with which the surgeon has to contend in the human: these experiments were referred to by Dr. W. T. Bull, when reporting his first successful case. In the *New York Medical Journal* of February 14, 1885, he says: "The propriety of exploring the abdomen for gunshot wounds has been amply discussed by many surgeons, both here and abroad—Otis, Sims, Gross, Dugus, McGuire, Kinloch, and Parkes in this country; Legouest, in France, and Nussbaum in Germany, have urgently advocated operative interference."

These writers, however, were unable to adduce a single successful case, and it remained for Dr. Bull to clearly demonstrate the now generally acknowledged fact, that with perfect antiseptic precautions and the most thorough attention to detail, laparotomy may be successfully employed in penetrating wounds of the abdomen, and should be so employed in all suitable cases.

That the "chaotic" ideas of *The Lancet* are not altogether entertained abroad is shown by the fact that in "A Manual of Surgery," edited by Mr. Frederick Treves, of London, and published during the present year, full credit in this respect is accorded to Dr. Bull.

During the winter of 1883–84, Dr. Bull advised the house staff of the Chambers Street Hospital, on which I was at that time serving, to watch for a case of penetrating gunshot wound, stating his conviction that laparotomy was indicated in such cases. This was prior to the publication of Professor Parkes' experiments.

CHARLES A. POWERS, M.D.

IS THERE AIR WITHOUT MICROBES?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In an editorial entitled "Opposition to Theories of Microbial Infections," in your issue of June 12, 1886, you quote, with comments that amount almost to a declaration of neutrality, the following among other sentences from a paper on cataract operations by Dr. B. I. Baldwin, of Alabama: "There is bread that hath no leaven, and air as well without germs." If this statement means anything, it must mean that there is air with which we ordinarily come in contact that is free from germs. It would be totally irrelevant to the subject if it

referred to the air above the clouds, of which it is probably true.

What are the facts regarding the existence of germs in the air?

Tyndall's experiments in the Royal Institution are too well known to require detailed description. Infusions of nutrient substances were exposed in open test-tubes in the air of a room, with the uniform result that germs were deposited from the air, and the fluids rendered rapidly opaque by their proliferation. By a calculation based upon the space occupied by each tube and the time required for infection, Tyndall estimates about seven thousand germs in each cubic foot of space in the room; but he adds: "This, moreover, would only be a fraction—probably a small fraction—of the germs really present in the air. In his presidential address to the British Association at Liverpool, Professor Huxley ventured the statement that myriads of germs are floating in our atmosphere. Certain experimenters have rashly ridiculed this statement. In view of the foregoing calculations it, however, expresses the soberest fact."

Everyone who has practised culture experiments knows how difficult it is to avoid the introduction of germs into test-tubes, flasks, etc., if they are exposed but for a moment to superimposed strata of air, thus allowing the particulate matter, which is composed largely of germs, to gravitate into it.

It may be objected that these experiments were made in the laboratory of the Royal Institution, where repeated experimentation had polluted the air. This objection, fully anticipated by Tyndall, is fairly answered by the repetition of these experiments with precisely similar results by Mr. Darwin in his study at Down, in Sir John Lubbock's study, and at the Kew Gardens.

But if "there is air without germs," where must we go to find it? Certainly not in any atmosphere where surgical procedures are likely to transpire. The ordinary conditions of social life and relations are such that *their atmosphere is never free from germs.* Professor Miguel, in his investigations at the Observatoire de Montsouris, near Paris, has, indeed, failed to find germs at a height of six to twelve thousand feet. But, descending to lower levels, he finds them gradually increasing until, in the atmosphere of Paris, he estimates about two thousand germs to the cubic foot. There is no reason to believe that the atmosphere of populous districts has a cubic foot of air free from germs; while there is evidence, abundant and irrefutable, proving their uniform presence in immense numbers wherever sickness and accidents and surgical operations are likely to occur. Perhaps there is air without germs, but Dr. Baldwin's cases will have to move out of Alabama or go up in a balloon to find it. Alabama may have bread without leaven, but it can be safely assumed that it has no air within one hundred feet of *terra firma* without germs.

The pernicious effects of air upon accident and operation wounds has been fully recognized for three centuries. During the sixteenth century it was recognized by Ambrose Paré, Jean Andre Delacroix, Wurtz, Fallopius, and others; in the seventeenth century by Wiseman, and others; in the eighteenth century by Belloste, Parmanus, Anel, Boerhaave, Bell, Hugh Munro, James Latta, and most completely of all by Abernethy (1793). It is proper to state that these views were opposed by John Hunter and John Bell. It would be impossible within proper space to refer to the works of those who, in the present century, have aided in establishing the fact that the ingress of ordinary air to wounds is always fraught with a danger which varies in degree and kind with the conditions of the atmosphere. Our knowledge of atmospheric conditions and of wound processes now enables us to positively affirm that these dangers are exclusively dependent upon the kind of germinal matter which the air contains. It is certain that if it contains none, its access to a wound, at proper temperature, can do no possible harm. It is also equally certain that if there is any germinal matter in the air, its introduction into wounds may vary from the slightest disturbance to the death of the patient.

Were it not for the introduction of these germs all wounds would heal without suppuration; for we must now accept the dictions that *without microbes there can be no pus.* Whatever doubt there may have been about this question seems to have been removed by the recent prize essay of George Klemperer, an undergraduate of Berlin University. He has shown with apparent conclusiveness that chemical irritants may produce "coagulation necrosis," but cannot cause suppuration. As editorially remarked in the "Annals of Surgery," "it is not likely that the maxim that micro-organisms are the cause of all suppuration will be again called in question in future."

No amount of witticism or ridicule will explain away or alter the rôle of these organisms. An appeal to the "all-wise and ever-merciful Maker" in such a relation, is the merest bathos, and unworthy a scientific discussion. It would be just as rational to argue the non-existence of cataract, glaucoma, or yellow fever, because they are not consonant with somebody's conception of the "all-wise and ever-merciful Maker."

Of course, it is not claimed that all germs are pathogenic. But it is claimed that whether the germs in a particular stratum of air which comes in contact with a wound are pathogenic or not can only be answered with a certain degree of probability, unless culture experiments have given to the question a definite solution. The morbid processes which they excite in wounds are very decisive "culture experiments," which ought, hereafter, to be called *culture crimes.* The only safety is in protecting wounds from contact with the air, unless strained of floating matter, or purified by chemicals. Cleanliness *is* the great desideratum. Asepsis is the object of anti-sepsis; and if it can be obtained without the use of chemical irritants, so much the better. But to deny the existence of germs in the floating matter of the air—germs which it is possible may have been wafted from pyæmic abscesses, or scarlatinal desquamations—is to deny facts which are as definitely established as the composition of water, and are much easier of demonstration.

The brilliant results obtained by Mr. Lawson Tait and others show what is possible by a strict and scientific regard for cleanliness. The comparative rarity of wound infection, and the invariable infection of dead nutrient matter, proves that there is something in living structures which resists germ development. But this resistance is not by any means universal. Mr. Tait himself says: "What condition of the system it is which is favorable to operations is almost unknown. . . . I am perfectly certain that apparent perfect health is by no means a certain indication of a power of resistance to those conditions, whatever they be, which result in so-called septic poisoning."

In view of this uncertainty, and the further uncertainty regarding the specific nature of the germs in any given stratum of air, and in view of the clinical fact, established by almost universal experience, that access to a wound is injurious, is it not safer, nay more, is not our imperative duty to prevent, so far as possible, the introduction of germinal matter from the air into wounds?

Respectfully, G. W. McCaskey.

Fort Wayne, Ind., June 26, 1886.

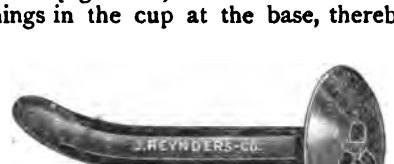
Dr. Cutter's Dictionary.—A German-Japanese medical dictionary has just been published in Tokio. It was compiled by Dr. Shigu, a government examiner in medicine, and Messrs. Take and Shibata, officers of the Sanitary Bureau. The work contains 1,400 German terms, with definitions in Japanese, and it is stated in the preface that it is based upon the "Dictionary of German Terms used in Medicine" compiled by Dr. George R. Cutter of this city.

New Instruments.

A MODIFIED INTRA-UTERINE PESSARY.

By H. J. BOLDT, M.D.,
NEW YORK.

THE accompanying cut represents a pessary made for me by Messrs. J. Reynders & Co. It will be seen that it has three deep grooves, which connect with sufficiently large openings in the cup at the base, thereby allowing

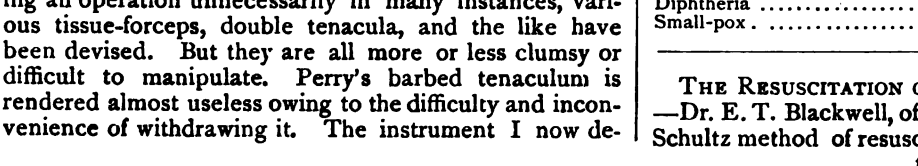


for free drainage from the entire body of the uterus, the stems heretofore in use permitting drainage only from a circumscribed portion, either at the fundus or on one side, if precaution was taken at all to secure it. The upper third of the stem is slightly curved, to facilitate its introduction, but there is also a set of straight pessaries made, or the curved one can be straightened in the usual way, if it is preferable to use a straight instrument in the case. The sizes are different. I have had the set made in four, thickness and length of stem variable. A small tampon of carbolated absorbent cotton placed against the cup, which has its concavity directed toward the uterus, is sufficient to keep the instrument *in situ*. The stem can be removed at intervals to suit the operator. The slight amount of extra trouble which the cleaning of the grooves gives, is, I think, amply repaid by the thorough drainage.

A MODIFED SIMS TENACULUM.

By R. C. M. PAGE, M.D.,
NEW YORK.

FROM the fact that Sims' uterine tenaculum in the hands of most surgeons easily slips out of tissue, thus prolonging an operation unnecessarily in many instances, various tissue-forceps, double tenacula, and the like have been devised. But they are all more or less clumsy or difficult to manipulate. Perry's barbed tenaculum is rendered almost useless owing to the difficulty and inconvenience of withdrawing it. The instrument I now de-



sire to place before the profession is Sims' tenaculum, with a slide on it which prevents it from slipping, and is especially useful in operations on vaginal tissue. It possesses the advantages of simplicity and convenience.

31 WEST THIRTY-THIRD STREET, March 6, 1886.

MEDICAL PRACTICE IN NEW ZEALAND.—Dr. Withers, of the *Weekly Medical Review*, of Laurence, New Zealand, writes that in New Zealand, with a population of 600,000, there are about three hundred duly qualified medical practitioners, being at the rate of one to every 2,000 of the population. Up to the present time there have been several local medical societies, but a strong movement is now on foot for the union of all these into one great medical association. By doing this, considerable influence can be brought to bear on the House of Representatives to promote legislation on matters affecting the profession; and other matters, such as the repression of quackery, will be in responsible hands.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 11 to July 17, 1886.

GIBSON, JOSEPH R., Major and Surgeon. Granted leave of absence for three months, to take effect about August 1st. S. O. 158, A. G. O., July 10, 1886.

BARNETT, RICHARDS, Captain and Assistant Surgeon. Leave of absence extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 15, 1886.

GARDNER, EDWIN F., Captain and Assistant Surgeon. Granted leave of absence for two months. S. O. 158, A. G. O., July 10, 1886.

OWEN, WILLIAM O., JR., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Schuyler, New York Harbor. S. O. 84, Division of the Atlantic, July 15, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended July 18, 1886.

WENTWORTH, A. R., Assistant Surgeon. Detached from the U. S. S. Brooklyn, and wait orders.

NORT, OLIVER D., Assistant Surgeon. Detached from the U. S. S. Minnesota, and to the U. S. S. Brooklyn.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 17, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	12	2
Scarlet fever	32	5
Cerebro-spinal meningitis	7	7
Measles	55	6
Diphtheria	55	21
Small-pox	1	0

THE RESUSCITATION OF INFANTS BORN ASPHYXIATED.—Dr. E. T. Blackwell, of Cedarville, N. J., referring to the Schultz method of resuscitating the new-born child, writes that he has practised for many years a somewhat similar plan, the following description of which was published in the *Medical and Surgical Reporter*. The method consisted in tossing the child, with a quick motion, the placenta being still attached. The rapid movement causes the arms to fly up, lifting the chest-walls, and causing the infant to take in air by a sudden sob. The method may appear rude, but it has succeeded in many apparently desperate cases. It has the merit of instant applicability with very quick results, and experience with it has led the author to regard it as an unfailing means of insuring the recovery of newly born infants, apparently dying from asphyxia. In the procedure the head, neck, and shoulders are supported in the palm of one hand, while the buttocks rest in the other. The tossing may be repeated at suitable intervals as long as seems necessary.

THE DANGERS OF PROGNOSIS.—A tailor in Vienna having been told by his physician that he was suffering from an incurable disease, drew a pistol and fired two shots at his medical adviser, and then killed himself. The physician was not severely wounded, and has now recovered.

THE INJURIOUS EFFECT OF THE BANDAGE AFTER LABOR.—Dr. Wm. B. Lyman, of Wilson, Wis., regards the bandage applied after labor as a fruitful cause of sub-involution of the uterus. The weight of the organ, after delivery, is two pounds or more, and this should normally be reduced to a few ounces within a few weeks, the greater part of the change taking place during the second week. In order, he says, that this change may progress perfectly the organ should have the freest possible circulation, and this is only obtained by the perfect rest of the patient in the recumbent position, all abnormal pressure over the organ being avoided. Nature does what she can by relaxing the abdominal parietes, and distending the intestines with gas, so as to cover the uterus with an air-cushion, and thus relieve the organ from undue pressure during contraction of the abdominal muscles. Under these conditions there is free and uninterrupted circulation through the blood-vessels and lymphatics of the uterus and its appendages. But the bandage, Dr. Lyman maintains, exerts constant pressure on the organ, confining it rigidly against the walls of the false pelvis, and when a pad is also applied, the uterus is more or less impacted in the brim of the pelvis, the ligaments are stretched, and malpositions and passive congestion result. Experience has taught him, he says, that a bandage does not add to the comfort of the patient, and he believes that it should be discarded, except in certain cases where its application is clearly indicated.

OVARIOTOMY IN RUSSIA.—Dr. V. Matveyeff has collected the statistics of all the reported cases of ovariotomy performed in Russia up to the present time (*Russkaya Medetsina*, June 1, 1886). The first laparotomy was performed by Vanzetti, in Kharkoff, in 1848, but the patient died. The first successful ovariotomy was reported by Professor Krassovski, in 1862. The total number of cases was 696, of which 213, or 30.4 per cent. died. It is to be regretted that the author does not give the proportion of successful cases year by year, as in this way only is it possible to judge of the progress made.

MULTIPLE TÆNIA.—Dr. Gurfinkel writes, in the *Vratch*, that he had a patient to whom he gave extract of male fern with the result of causing the expulsion of one hundred and two tape-worms. The pieces, placed end to end, measured two hundred and thirty-eight feet. Twelve distinct heads were found.

PRIORITY IN INVENTION OF THE PNEUMATIC CABINET.—Dr. Henry B. Lathrop, of Los Angeles, Cal., writes: "The papers read by various gentlemen before the Climatological Association induce me to say from the shores of the Pacific that some, at least, of our thunder is being stolen. Early in the fall of 1884 Dr. Edward C. Folsom, of Santa Monica, made, or rather had made, at great expense, a pneumatic cabinet. The coldness of the profession and the ridicule heaped upon the theories advanced caused Dr. Folsom to abandon the investigations he had begun. From him, in January, 1885, I purchased the cabinet, and have been experimenting with it ever since. For my pains I was sent to a sort of professional Coventry, and mildly held up before the community as violating the unwritten laws of ethics. So far had this thing gone that I myself felt quite 'quacky,' when, taking up a recent copy of THE RECORD, I find myself no quack, but a pioneer in the pneumatic treatment of disease. While Dr. Folsom and myself deserve probably the priority of invention and use in this country of the cabinet for treating disease, the wider range of observation enjoyed by the gentlemen who have already written on the subject make their conclusions more valuable than any we could advance. Still, if we deserve it, we would like to claim for ourselves priority of observation. I am sorry that a close corporation has been formed for the manufacture and rental of the cabinets. Mine having been an accomplished fact before the company was started, I shall continue to use it whenever and however I please for the benefit of science and of my fellow-creatures." [We fear our correspondent's claim to priority is not well founded. By referring to THE RECORD of January 17, 1885, he will find cases there reported of patients treated in the cabinet as early as in September, 1883.—ED.]

GLEET AND STRICTURE.—In a paper on the treatment of gleet, in the *Albany Medical Annals*, Dr. O. D. Ball says that the more cases of this nature that he sees the more is he convinced that the statement of Otis that "all cases of gleet are dependent upon strictures, either of large or small calibre," is wrong. A fair proportion of these cases, he says, have no stricture, and he mentions the case of a man with an old chronic specific urethritis whose urethra admitted a No. 36 French sound with as much ease as the ordinary canal will a No. 15.

A LOW TEMPERATURE.—Dr. C. W. Suckling reports in *The Lancet* the case of a woman with myxœdema who was comatose some time before death. The pulse was 36; the respirations 12 per minute. The temperature could not be taken with the ordinary clinical thermometers, which were not graduated below 95°, the mercury not rising to within an inch of the first mark on the glass. A thermometer used for taking the temperature of baths was separated from its iron frame, on which was the graduation, and the bulb, was placed under the tongue for half an hour, the level of the mercury being marked on the stem with ink. The thermometer was again placed in its frame, and the registration was 76.5°. The next day the pulse was imperceptible at the wrist, the heart-beats being 20 per minute. The temperature, taken the same way as the day before, was 70°. During the day it was taken several times, and varied from 66° to 70°. The patient died the same night. The bath thermometer, immersed in warm water, at the end of three minutes registered 90°, a clinical thermometer 98.5°, so that the figures given represented, with perhaps the difference of a degree or two, the actual temperature in the mouth, which is one of the lowest ever recorded during life.

A CLINICAL PICTURE OF A BAD DISEASE.—A writer in one of our esteemed contemporaries in the Southwest breaks loose, and gives expression to his views rather unconventionally as follows: "Dengue is a viviparous, homogeneous, amphibious hermaphrodite from the head of 'Bitter Creek,' close to 'Wild-cat Run.' It is indigenous in Austin and spontaneous in Dallas—among hogs, dogs, cats, and other non-office seekers. It is contra-indicated in all cases where a fellow expects to engage in a prize-fight or make a 'crap.' It is bilateral, having an inside and an outside. It has no symptoms—it strikes a fellow on his way from church or in a saloon, and paralyzes him to the end of his hair, and then feels out for 'other worlds to conquer.' Its pathology is confined mostly to the whole body, skin, and mouth. It destroys a man's pugnacity and plants instead thereof humility, and a third-class case of rheumatic-gout-small-pox-fits-inflew-endways and chloroformmorbus. Those who have not had their pegs knocked from under them by this fiendish short-rib searcher, say they think they have 'had a touch of it.' To all such we wish to say: Wait till it 'touches' you up in earnest, and then you will say in the words of Horace Greeley, 'I have *wilted*.'"

EXTRA-UTERINE PREGNANCY OF SEVEN YEARS' DURATION.—Dr. John Homans reports, in the *Boston Medical and Surgical Journal* of May 20, 1886, a case of extra-uterine pregnancy, dating back seven years. Laparotomy was performed, and a tumor was discovered which contained four or five pints of a fluid resembling pus, but which was composed of a fatty granular detritus, but no pus-cells. At the bottom of this sac were found all the bones of a full-term fœtus, completely macerated and separated. The patient died about four hours after the operation.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

EXCISION OF THE KNEE-JOINT,[1]

TOGETHER WITH A REPORT OF THREE HUNDRED AND TWENTY-NINE CASES TREATED ACCORDING TO MODERN ANTISEPTIC METHODS, AND FOUR CASES OF RESECTION OF THE HAMSTRING TENDON TO PREVENT RELAPSE IN CHILDREN.

BY A. M. PHELPS, M.D.,

CHATEAUGAY, N. Y.,

PROFESSOR OF ORTHOPEDIC SURGERY, UNIVERSITY OF VERMONT; MEMBER OF THE NEW YORK STATE MEDICAL SOCIETY, ETC.

IN 1879 I performed a complete excision, in a case nine years of age, for destructive chronic disease of the knee-joint. The case came into my hands after the limb had become somewhat flexed, and sinuses had formed upon the outer and inner sides of the knee. I proceeded to open the joint for the purpose of exploration and establishing drainage, but found extensive disease. The entire articular surfaces of the bones were in a necrotic condition. I at once extended my incision from the inner condyle to the outer, and below the patella, describing a curve, and freely opened the joint. After sawing away the articular surface of each bone in such a manner as to allow them to come together in a slightly flexed position, and removing the patella, together with all diseased tissue in and about the joint, and excising the old sinuses, I wired the bones together and dressed the leg with plaster-of-Paris applied over the dressing, and slung it up in order to keep the part at perfect rest. Before the plaster-of-Paris became hard a large opening was cut, through which the subsequent dressings were made. The case progressed favorably and recovered, being discharged at the end of four months. Eight months subsequently the patient returned, and I found that the leg was flexed at an angle of forty-five degrees. The patient suffered some pain at the point of excision during locomotion. Upon an attempt to straighten the leg pain was produced, and also severe reflex spasm of the hamstring tendons. I at once etherized the patient, *resected the hamstring tendons* through small open wounds, and attempted to straighten the limb, but failed. I then made an incision directly across the front of the joint and sawed out a wedge-shaped piece of bone, sufficiently large to admit of straightening the limb; the leg was placed in a *perfectly straight position*, the bones wired and dressed as before. There was some shock, and fever following, which subsided after a few days. From this time the case went on to recovery, and at the end of three months was discharged, well, with one inch of shortening. A posterior splint was worn for six months. I have learned by letter that the case has never relapsed. The relapse, Mr. President, occurring in this case—which to me at that time was somewhat novel—and my observations since of several cases of this kind in the hospitals of Europe—and which, I learned from European surgeons, is by no means uncommon—induced me to accept your kind invitation to present here, at this meeting, a paper on excision of the knee-joint. Why did the case relapse? A glance at the drawing (Fig 1) will, I think, furnish a solution of the question.

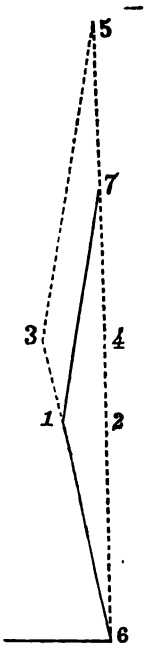

FIG. 1.—The limb being placed in a slightly flexed position, 6, 1, 7 makes an angle at 1, 2. The weight of the body acting upon this point when the limb is flexed, may produce flexion by gradual and constant pressure at 1, which irritation causes reflex contraction of the hamstring tendons. Therefore the weight of the body and the reflex contraction of the hamstrings causes the relapse. The relapse occurring later is caused by the growth of the limb, 6, 3, 5, making the angle greater at 3, 4. The weight being increased, the angle greater, and the bones longer, exercises a greater strain at 3.

The second case, in a boy aged ten years, was one of chronic suppurative inflammation of the knee-joint. One year before he received a blow upon the knee which produced a subacute inflammation, which gradually destroyed the joint. The leg was flexed at an angle of forty-five degrees, and the capsule was distended with fluid. An exploratory incision was made just above the inner condyle. Upon introducing the finger the ends of the bones were found denuded of cartilage and the joint filled with a gelatinous material. After a thorough washing, so as to expose the parts, I found the bone so extensively diseased that an excision of the entire joint seemed to promise the best result. The incision, as already described, was made. With a saw the articular surfaces were removed in such a manner as to allow the bones to be approximated in a straight line. After the removal of all diseased tissue the hamstring tendons to the extent of an inch and a half were resected through small open wounds. The bones were wired and the limb dressed the same way as in the previous case. A small amount of suppuration occurred in the soft parts. The recovery was perfect, and after three months the patient was discharged with bony union. The limb has never relapsed, and is as useful as a stiff limb can be with three-fourths of an inch shortening.

CASE III.—Aged sixteen years, chronic disease, subluxation, and necrosis of the head of the femur; possesses no special point of interest. The steps, as already given, with the exception of dressing, were taken; the case recovered and was discharged at the end of three months with a good limb; no pus or fever occurring after the operation.

CASE IV.—Aged twenty years, chronic inflammation from injury ten years previous. The leg was flexed and the joint filled with a cheesy substance. Crepitation could be distinctly felt and heard. An exploratory examination by incision revealed the fact that extensive disease of the bones was present. Amputation or excision was to be decided upon. An incision beginning at the inner condyle, and carried directly over the centre of the patella, which was sawn through, after Volkmann, to the external condyle, exposed the joint most perfectly. Not only was there extensive bone disease, as seen in those specimens which were removed, but the entire capsule was thickened and infiltrated. With curved scissors and forceps all diseased tissues, including the capsule of the joint, were removed. The joint-surface of the patella was also scraped off. The bones and the patella were now

[1] Read before the New York State Medical Society, February, 1886.

wired, which nicely coaptated them, and the wound closed. Large drainage-tubes were inserted. Permanent dressings were applied, consisting of sublimated gauze and wood-wool bags, extending from the foot to the body, and over all the plaster-of-Paris bandage. The leg was slung up. At the first dressing, seven days later, the wound had entirely healed, except at the point of drainage. The drainage-tubes were removed and the leg again dressed as before. Three weeks later, at the second dressing, the wound was found perfectly healed. At the end of two months the patient was out on crutches. Four months from the time of the operation he walked on the leg. In this case there was no rise of temperature above 100° F.; pulse never above 90; no pus or pain, and the wound united by primary union as in the preceding case.

CASE V.—Aged thirteen years; male; suffering from chronic inflammation of the knee-joint for six years. Leg flexed at an angle of forty-five degrees. The joint was found filled with fungus and there was extensive disease of the bones. I proceeded to perform an operation according to Neuber, of Kiel, Germany, and which, I believe, has not heretofore been resorted to in this country (see Figs. 2 and 3). An incision, extending from the outer con-

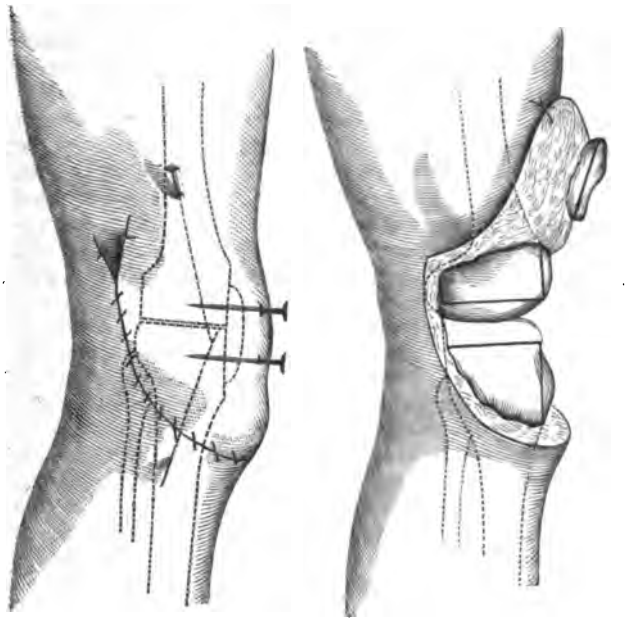

FIG. 2. FIG. 3.

dyle, underneath the patella to the inner condyle, brought the joint into view. The heads of the femur and tibia were sawed square, parallel with the joint surfaces. The posterior projecting portions of the condyles were also removed. The patella was now joined at its under surfaces and securely nailed to the front of the tibia and femur with strong steel nails. A wire was also inserted on each side, from tibia to femur, to more securely hold the bones. The case was dressed the same as the preceding. I neglected to say that the hamstrings were resected, and all disease removed from in and about the joint. The case developed no fever or pus, and but little pain, and healed perfectly under the dressings in three weeks. Patient walks well with a perfectly straight leg.

CASES VI. and VII.—Male, twenty-one years of age; female, twenty years of age; both chronic inflammation of the knee-joint, of several years' standing, with extensive bone disease, were resected before the class in Mary Fletcher Hospital, University of Vermont. Fenwick operation was performed. The cutting of the bones constitutes the distinguishing feature (see Fig. 3). The cases were dressed similarly to the preceding case, and healed perfectly under two dressings, in three weeks, without pus or fever above 101°, and with no considerable degree of pain. Discharged from the hospital in seven weeks, cured.

CASE VIII.—Female, aged nineteen, extensive fungous disease of joint, with osteitis of the head of femur. The joint was opened for exploration and washing out, but the disease was found to be so extensive that immediate excision or amputation was decided upon. Excision was performed before the class in the amphitheatre of the above-named hospital. The excessive administration of ether caused death, which took place soon after the completion of the operation. The operation of Dr. Fenwick was performed. The microscope revealed the presence of pus in the cancellated structure of the bone.

The favorable course in Cases III., IV., V., VI., and VII., was due to the perfect coaptation of the bony and soft parts, good drainage, and antiseptic dressings which did not require constant change; thus allowing the parts to remain at perfect rest, and at the same time, by the method of their application, exercising equal pressure, which regulated the circulation, preventing swelling, and obliterated cavities or pockets which might have existed when the soft parts were brought together. In addition to all this the carrying out from the beginning to the completion of the operation, and at the subsequent dressings, the most scrupulous details of modern antiseptic methods.

Want of time compels me to thus briefly report these eight cases, with nine operations.

The end sought in all operations of excision of the knee-joint should be:

1st. To remove all diseased tissue, including the capsule of the joint.

2d. To make the incisions in such a manner as to furnish easy access to every part of the joint and furnish perfect drainage.

3d. To restore all tissues to their normal position without leaving cavities.

4th. To get perfect drainage.

5th. To insure absolute immobility of parts after the operation.

6th. In children, after *resection of the flexor tendons, placing the limb straight and utilizing the patella when practicable, to prevent relapse.*

The operations which are preferable and meet these indications best are Volkmann's, Fenwick's, and Neuber's.

If these requirements are carefully followed out, and if all diseased tissue is removed, including the capsule of the joint, the surgeon will have to deal simply with compound fracture, and the mortality from the operation ought not to be greater than from accidental compound fracture of the femur which has been carefully wired and dressed according to the light which surgery of the nineteenth century sheds. The peculiar advantage of sawing the

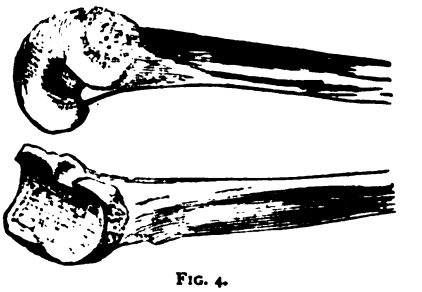

FIG. 4.

bones after Fenwick's method keeps them in position, even if a slight subsequent flexion occurs, as the head of the femur fits the socket-head of the tibia similarly to a hinged joint. Should flexions occur in cases where the bone is cut squarely across, a cavity would be left on the anterior side, making a pocket for the accumulation of secretions between the ends of the bones, which would be quite likely to prevent bony union or defeat the object of the operation by long-continued suppuration. The extreme difficulty, however, of cutting the bones to fit perfectly, without leaving cavities between their surfaces, after Fenwick's method, is quite apparent, as curves are more difficult to make than angles.

TABLE I.

Reference.		Operator.	Patient.	Excision.	Result.	Disease.	Remarks.
Birming. Med. Review, 1879, viii., 201.	1	West, I. F.	Female. 26.	Retention of gouged patella.	Patient walks six miles.	Caries of articular bones.	
Australian Med. Jour., 1885, vii., 252.	2	Webb.	Female, 24.	Complete.	Amputation on account of abscess cavity in tibia.	Purulent synovitis; ascites.	Bone wired.
Med. News, 1884, xlv., 493.	3	Stimson.	Male, 45.	Complete.	Good; patient walks with little limp.	Suppurative arthritis for seven years.	Wire suture and splint.
St. Louis Courier of Med., 1882, viii., 532.	4	Causon.	Male, 27.	Complete.	Bony union seven weeks later.	Rheumatic arthritis; deformity.	
Australian Med. Jour., 1879, n. s., 579.	5	Fitzgerald.	Female, 46.	Complete.	Useful leg; subsequent relapse; amputation.	Chronic arthritis five years.	
British Med. Jour., 1884, i., 268.	6	Percival.	Male, 40.	Of cartilages.	Three months after walks well without crutch.	Chronic arthritis five years; anchylosis.	Posterior splint.
British Med. Jour., 1879, ii., 317.	7	Morgan.	Female, 12.	Complete.	One year later, firm union; walks with ease. Sixteen months after, flexion to right angle.	Chronic arthritis.	
British Med. Jour., 1883, ii., 860.	8	Campbell.	Female, 35.	Complete.	Cured sixty-seven days after operation.	Acute ulceration of cartilages.	
New York Med. Jour., 1880, xvii., 156.	9	Briddon.	Male, 5.	Volkmann's.	Primary union; patella movable one-half inch.	Tubercular arthritis.	Catgut for bone.
St. Louis Med. Jour., 1883, xiv., 304.	10	Laidley.	Male, 26.	Complete.	Useful limb.	Necrosis, anchylosis, and deformity; traumatic.	Tenotomy of hamstring, post splint.
St. Louis Med. Jour., 1885, xlix., 79.	11	Lister.	Male, 11.	Complete.	.....	Strumous arthritis five years.	Tenotomy of hamstring, silver wire for bone.
Med. Times and Gazette, 1884, ii., 321.	12	Parker.	Male, 6½.	Complete.	No union; want of reparation; amputation.	Chronic arthritis.	
Bull. et Mem. Soc. de Chir. de Paris, 1881, vii., 571.	13	Boeckel.	Male, 2.	Complete.	Useful limb.	White swelling; fistula; deformity, right angle.	
Bull. et Mem. Soc. de Chir. de Paris, 1882, viii., 319.	14	Cazin.	Female, 6½.	Complete.	Primary union, no bony union; new articulation nearly as good as new; no patella.	Osteoarthritis.	Gutta-percha apparatus.
Bull. et Mem. Soc. de Chir. de Paris, 1881, vii., 57.	15	Boeckel.	Female, 7.	Excision, subsequent amputation.	Death from tubercular meningitis.	White swelling, four years' standing.	
Lancet, 1884, i., 889.	16	Boutflower.	Male, 7.	Complete.	Wound healed in fourteen days. In ten weeks leg was strong, with movement to one hundred degrees.	Chronic arthritis; anchylosis.	Watson splint.
Lancet, 1881, ii., 910.	17	Sympson.	Male, 7.	Complete.	One and one-fourth inch short; walks well without pain.	Chronic arthritis; sinuses.	Wire for bones.
Lancet, 1880, ii., 379.	18	Barber.	Female, 20.	Complete.	Wound healed, and fibrous union eight weeks after.	Chronic arthritis.	Back splint.
Lancet, 1879, i., 517.	19	Moore.	Female, 14.	Complete.	Good; one year after, straight and stiff.	Chronic arthritis.	
New York Med. Jour., 1879, xxix., 70.	20	Mason.	Male, 36.	Complete.	Walks with crutches; seven months later, still some caries.	Caries in condyles.	Plaster-of-Paris splint.
New York Med. Jour., 1885, xlii., 161.	21	Ripley.	Male, 28.	Complete.	Good recovery; two inch shortening.	Chronic arthritis for three years.	Wire for bones.
Chicago Med. Jour., 1883, xlvi., 471.	22	Bogue.	Female, 16.	Complete.	Four years after, good useful limb, four inches short.	Chronic arthritis.	Anterior splint and suspension.
Med. Press and Circular, 1880, i., 85.	23	O'Grady.	Male, 18.	Removal of patella and part of shaft of femur.	Amputation seventy-five days later.	Chronic arthritis	Box splint.
Dublin Monthly Jour., 1884, lxxviii., 172.	24	Bennett.	Female, 10.	Complete.	Freely movable joint to right angle; good health at seven months.	Chronic arthritis; partial anchylosis.	Plaster-of-Paris splint.
Kansas City Med. Jour., 1884, v., 48.	25	Von Quast.	Male.	Complete.	Six months later could walk well; one and three-fourths inch shortening.	Bullet-wound of femur and tibia.	Plaster-of-Paris splint and suspension.
Am. Jour. Med. Sciences, October, 1884.	26	Fuller.	Male, 16.	Complete.	Healed by primary union; one dressing.	Tubercular arthritis; three years' deformity.	Steel nails for bone ends.
Pittsburg Med. Jour., 1882, ii., 167.	27	Wallace.	Male, 33.	Complete.	Slightly movable joint, walks with trifling limp.	Suppurative arthritis; deformity; anchylosis.	Posterior splint.
Med. and Surg. Reporter, 1878, xxxix., 312.	28	Schenck.	Male, 35.	Complete.	Doing well a week later.	Tubercular arthritis.	Long cradle splint.
Glasgow Med. Jour., 1880, xiv., 423.	29	Benton.	Female, 9.	Complete.	Primary union; walks well three months later.	Ulceration of cartilages.	
Australian Med. Jour., 1884, iv., 163.	30	Drew.	Male.	Complete.	No suppuration.	Chronic arthritis.	Hays' splint.
Arch. Med. Belges, 1881, xix., 116.	31	Leroy.	Male, 14.	Complete.	Firm union; walks well with high shoe.	Tumor albus; deformity.	
Indian Med. Jour., 1880, xv., 185.	32	Mahendra Nathahdedar.	Male, 14.	Complete, patella not removed.	Perfect bony union; treatment one hundred and eighty days.	Suppurative arthritis.	McIntyre splint.
Indian Med. Jour., 1881, xvi., 309.	33	Shah.	Male, 10.	Complete, patella not removed.	Recovery.	Anchylosis from unknown cause.	Tenotomy of hamstrings.
.....	34	Weir.	Female, 19.	Complete.	Subsequent amputation.	Tubercular arthritis.	
D. Zeit. für Chir., 1882, xvii., 564.	35	Preetorius.	Female, 9.	Volkmann's.	Died from shock.	Fungous arthritis.	
NEW YORK MEDICAL RECORD.	36	Morris, R. T.	Male, 13.	Complete.	Healed under one dressing; walks well.	Traumatic arthritis; anchylosis.	Tenotomy of hamstrings.

In Volkmann's and Neuber's methods the patella plays the important part of holding the bones in perfect coaptation; in Neuber's, it forms a splice of the bones; while in Volkmann's, by the action of the quadriceps muscle and its immediate union to the surface of the femur and tibia which has been prepared for it, the patella performs the same function. In children the patella, if not extensively diseased, should be thus utilized. This, in connection with placing the limb in a perfectly straight position, and the resection of the hamstring tendons, will, I believe, prevent the disastrous relapses so frequently occurring in subjects under fourteen years of age. A posterior splint should also be worn for one year or more.

Tenotomy of the hamstring tendons has been frequently performed to allow the straightening of the limb before the operation, otherwise a greater amount of bone would be sacrificed. But as to resection of all the flexor tendons to prevent their subsequent action in producing relapse in children, I am not aware of its ever having been done prior to the four cases which I here report. After an excision, the leg, so far as the knee-joint is concerned, becomes a crutch, and, were all muscles and tendons which act upon it removed, the power of locomotion would not be affected. Therefore a resection of one or two inches of the hamstring tendons, through two small incisions, when done antiseptically, adds nothing to the danger of the operation.

The mortality from excision of the knee-joint, as compiled by Culbertson, from all sources in private practice is: Under five years of age, 38.9 per cent.; between five and ten years, 16.2 per cent.; between ten and fifteen years, 17.2 per cent.; between fif-

teen and twenty years, 30.1 per cent.; between twenty and twenty-five years, 39.4 per cent.; between twenty-five and thirty years, 37 per cent.; between thirty and forty years, 41.5 per cent.; over forty years, 52.6 per cent.; an average in all cases of 29.8 per cent. These figures show the most favorable age to be between five and ten. But there is more danger of relapse, non-bony union, and permanent shortening from cutting into the epiphyseal line at that age. Puberty is the most favorable age. From the same compilation the mortality from gunshot wounds is 75 per cent.; other injuries, 39 per cent.; disease, 31 per cent.; deformity, 13 per cent. The mortality from military amputations is: In the lower third of thigh, 50 per cent.; hospital amputations, 35 to 57 per cent.; amputations for disease, 22 per cent. Edwards' plates of military excisions show a mortality without excision of 80 per cent.; with excision, 80 per cent.; amputation, 73 per cent., being 7 per cent. in favor of amputation in gunshot wounds.

These statistics are made up from foreign wars and our late rebellion. If the above statistics are correct, and modern methods of operating and dressing were followed, clearly excision of the knee-joint should be abandoned in military surgery and also in gunshot wounds in which the bones of the joint are extensively comminuted. But these compilations were made in 1877, from cases many of which were operated upon prior to the advent of the more scientific antiseptic methods of to-day.

In Culbertson's tables (see "Prize Essay," 1876), 684 cases of excision of the knee-joint for disease, injury, and deformity are reported. I find 51 deaths from pyæmia, and septicæmia, 31 from exhaustion, 6 from erysipelas, 3 from hectica, 2 from phlebitis, 4 from secondary hemorrhage, and 1 from acute suppuration, a large majority of which are due to wound infections—a death-rate from all causes of 14.47 per cent.; from pyæmia and septicæmia alone of 7.45 per cent.

A glance at the tables appended, which have been carefully compiled from sources known to be rigidly antiseptic, and all since 1878, will furnish a key to the large per cent. of mortality prior to that date. In 329 operations are found 31 deaths—a mortality of 9.42 per cent. Excluding 21 cases of deaths from phthisis and other diseases not dependent upon the operation, gives a mortality of only 3.03 per cent. In 329 cases there are only 3 cases of septicæmia and 1 of pyæmia. Add to 9.42 per cent. the 14.47 per cent. death-rate from Culbertson's tables from wound-infection gives 23.89 per cent., which is nearly the exact rate furnished in his tables as the mortality following excision of the knee-joint. The reduction of mortality from 29.8 per cent. to 9.42 per cent. is sufficient evidence, I think, to convince the profession of the efficacy of modern antiseptic methods, and this has been mainly due to the prevention of wound infection, as I have already shown. Deducting the 21 cases of death not due to the operation reduces the mortality to 3.03 per cent. (see Table II.). The same 684 cases show, by Culbertson's tables, 77 amputations, or 11.25 per cent.; in the 329 cases reported in this paper 19, or 5.77 per cent.

I will state that the class of diseases, and the causes for which excision has been performed, vary but little in Culbertson's compilation and those of this paper. In his 684 cases are to be found less than a dozen cases of excision for recent injury. Another noticeable fact is, that in the table of Culbertson of "Excision for Deformities" there are 53 cases with no amputations, but 7 deaths—5 from sepsis, 1 from pleuro-pneumonia, and 1 from tetanus. The amputations are reserved for the operations performed upon already diseased or suppurating joints, but the mortality being about thirteen per cent. is still very much larger than the present mortality furnished from operations upon already diseased or suppurating joints, and, as stated by Culbertson, the per cent. is in one class of cases 29.8, the other 13. Wound-infection then was quite common, and difficult to do away with, when suppurative processes were already found in joints; now they are easily managed.

TABLE II.—*Showing Mortality of Cases of each Operator.*

Reference.	Operator.	Number.	Deaths.	Recoveries.	Subsequent amputation.*	Per cent. mortality.
International Ency. of Surgery, vol. iv., 5, 18.	Ashhurst, Jr.	26	2	24	..	..
International Ency. of Surgery, vol. iv., 5, 42.	Fenwick.	28	1	27	2	..
Transactions Eighth Int. Congress, surgical vol.	Schede.	30	4	26	..	..
NEW YORK MEDICAL RECORD.	Phelps, A. M.	8	1	7	..	.
D. Zeit. für Chir., 1880, xiii., 309.	Wahr.	3	..	3	..	..
D. Zeit. für Chir., 1880, xiii., 309.	Rydygier.	6	1	5	1	..
Charité Annalen, 1883, 368.	Bardeleben.	4	..	4	..	..
Bull. et Mem. Soc. de Chir. d. Paris, 1879, 461.	Poinsot.	6	..	6	..	..
Trans. Ind. Med. Soc., 1879, xxix., 108.	Eastman.	3	..	3	..	..
Hospitals-Tidende, 1884, 3 R., 241.	Hansen.	4	..	4	..	..
Hospitals-Tidende, 1879, 2 R., 441.	Saxtorph.	31	7	23	..	..
Lancet, 1883, i., 101.	Golding Bird.	2	..	2	..	..
Rev. de Chir., 1883, iii., 352 and 394.	Ollier.	2	..	2	..	..
Deutsch. Zeit. für Chir., 1885, xxii., 149.	Maas.	32	9	23	2	..
New York Med. Jour., 1880, xli., 421; Medical News, 1884, xliv., 409.	McBurney.	9	..	9	..	..
Edinburgh Med. Jour., 1879, xxv., 500.	Spence.	2	..	2	..	..
Med. Times and Gazette, 1881, ii., 573; Liverpool M. C. Jour., 1883, iii., 80.	Pusey.	5	..	5	..	..
New York Med. Jour., 1883, xxxvii., 325; Annals of Surgery, 1883, viii., 30.	Poor.	6	..	6	..	..
Lancet, 1881, ii., 705.	Ransford.	3	..	3	..	..
Hospitals-Tidende, 1884, 3 R., ii., 241.	Hansen.	3	..	3	..	..
Dublin Monthly Jour., 1882. 3ds., lxxiv. 326.	Stokes.	3	..	3	1	..
Dublin Monthly Jour., 1880, 3ds., lxx., 1.	Coppinger.	3	..	3	..	..
Wiener Med. Presse., 1879, xx., 742.	Albert.	3	..	3	..	..
Lancet, 1884, ii., 145.	Jallmd.	6	1	5	1	..
Chicago Med. Jour., 1884, xlix., 289.	Fenger.	3	..	3	..	..
Lancet, 1881, ii., 910; 1885, i., 473.	Brock.	2	..	2	..	..
Med. Press and Circular, 1882, xxxiv., 505.	Norton.	2	..	2	..	..
Pester Med. Ch. Presse, 1882, xviii., 35; Chir. Klin. im K. Julius Hosp. zu Würzburg, 1879, 153.	Puky.	3	..	3	1	.
Report from books of Roosevelt Hospital to NEW YORK MEDICAL RECORD, by Dr. Silver, House-surgeon.	Sands, H. B.	8	1	7	1	..
Report by letter to NEW YORK MEDICAL RECORD, by Dr. Gerster.	Gerster, A. G.	10	1	9	2	..
British Medical Jour., 1881, i., 852; Medical Chronicle, 1885, ii., 275.	Wright, G. A.	17	2	15	4	..
From table in this paper by different operators.	.....	36	2	34	4	..
Morris, "How We Treat Wounds To-day," p. 20.	Bruns.	20	..	..	..	..
Total.....	.....	329	31	297	19	9.42
Deducting 15 phthisis, 1 ether, 2 amyloid disease, 2 nephritis, 1 poisoned wound	.....	..	21	.	..	.
Leaving as a result of operations, deaths.	.....	..	10	..	..	3.03

* Per cent. of amputations following excision, 5.77.

Cases for excision of the knee-joint should be carefully selected. In children under eight years of age it should never be resorted to, except in cases of destruction of the entire joint, and not until after other means have failed. It is better at this age to excise through exploratory openings such portions of bone and tissue as are found diseased, using the gouge-scoop and chisel thoroughly, establishing perfect drainage, fixation, and extension. Chronic diseases with deformity, either purulent or non-purulent, not yielding to the ordinary methods of treatment, are suitable cases at any age. Extensive suppuration, burrowing of pus, with many sinuses distributed about the joint, and extensive necrosis, making it difficult, uncertain, or impossible to remove all diseased tissue, are cases more suitable for amputation. Deformities from long-standing arthritis, with but little bone disease, limited to the articulations, are very favorable cases for excision. Anchylosis in bad position, compound luxation, and subluxations from long-standing joint diseases should be excised.

Many cases of joint disease among the poor, which might by long treatment be cured, if the patients could spare time from their work, should be excised, because they are then restored soon to health; when, if the opera-

tion were not performed, amputation would quite likely be demanded in after-years, owing to frequent relapses.

TABLE III.—*Showing Cause of Death.*

	Number.	Septicæmia.	Pneumonia.	Pyæmia.	Phthisis.	Ether.	Cause not stated.	Marasmus.	Amyloid kidney and liver.	Acute nephritis.	Poisoned wound, knee-joint.
Ashhurst, Jr.	2	1	1	..	..	..	..	..	..	..	..
Fenwick	1	..	..	1	..	..	..	..	..	..	..
Schodé	4	..	..	..	4	..	..	..	..	..	..
Phelps	1	..	..	..	..	1	..	..	..	..	..
Rydygier	1	..	..	..	..	..	1	..	..	..	..
Saxtorph	7	..	1	..	3	..	..	2	1	..	..
Maas	9	2	..	..	6	..	..	..	1	1	..
Jalland	1	..	..	..	..	..	..	..	..	..	..
Sands	1	..	1	..	..	..	..	..	..	..	..
Gerster	1	..	..	..	..	..	..	..	..	..	1
G. A. Wright	2	..	..	..	1	..	..	..	..	1	..
From Table No. 1	1	..	..	..	1	..	..	..	..	..	..
Total	31	3	3	1	15	1	1	2	2	2	1

I desire to acknowledge the invaluable assistance of Dr. Robert T. Morris, of New York, in furnishing to me the statistics of cases which he translated from foreign journals for publication in this paper.

A REVOLUTION COMPLETE IN THE AFTER-TREATMENT OF CATARACT OPERATIONS.

BY JULIAN J. CHISOLM, M.D.,

BALTIMORE, MD.

RECENT experiences at the Presbyterian Eye and Ear Charity Hospital of Baltimore City tend to show that needless and annoying restraint is practised upon cataract patients by surgeons who adhere to the time-honored method of bandaging, over compresses, eyes recently operated upon for the extraction of opaque lenses, or for the removal of pieces of iris, as in iridectomies. At the meeting of the National Medical Association in St. Louis, I was conversing with Dr. Charles E. Michel, of that city, on the comfort which cocaine gave to eye surgeons, when he mentioned that its introduction, and the discarding of general anæsthetics, with the accompanying vomiting, had enabled him to modify the eye-dressings even to the entire abandonment of the historic eye bandage. He had substituted for it a piece of gold-beater's skin for securing the eyelids, and found it an ample dressing. He also treated cataract patients no longer in dark rooms.

To me, accustomed to follow in the universally trodden path, and of applying over each eye a piece of soft cloth, then a mass of raw cotton as an elastic pad, then a well-secured bandage for obtaining and insuring (?) uniform and continued pressure, this was a startling innovation. It impressed me to such an extent that at the afternoon meeting of the Ophthalmological Section, a large attendance being present, I related my conversation of the morning, and asked if anyone had had any experience with adhesive straps and light rooms for the after-treatment of cataract cases. The voice of the Section was one of warning, that such an innovation would be fraught with great danger, and that we had better adhere to the course which had been shown by ophthalmic surgeons in all parts of the world to be a successful method of dressing. With compresses, bandages, and restraint in bed, in dark rooms, thousands of blind cataract patients had been made to see, and that, therefore, we had better not disturb so well-established and so successful a method. In discussing the subject I used in argument that because millions of women, in all parts of the world, after confinement, had been surrounded by an abdominal band, called a supporter, and had survived it, this had not deterred modern obstetricians from discarding what in most cases they knew to be more an abominable than an abdominal support; and that possibly modern eye surgeons would have to discard eye bandages for similar reasons.

Having a large amount of eye material at my disposal I promised the Ophthalmological Section that I would test this mode of dressing cataract cases at once, and would promptly report my experiments, if successful, so that through it eye patients might escape the annoyances to which they are now universally exposed.

My experiences by the new method of dressing have been so markedly satisfactory as to warrant me in discarding forever the stereotyped cataract compresses and bandages from the Presbyterian Eye Hospital. From this time forth a piece of white isinglass plaster will be my sole dressing for cataract and iridectomy patients, to the comfortable exclusion of all water applications.

Here is the detail of dressings and treatment which I now pursue in cataract cases. All cataract extractions are made under a four per cent. solution of cocaine. A few drops in the eye, the patient lying on the back, so as to retain the drops in contact with the cornea, will in ten minutes give all the immunity from pain desired. This solution has always served me well. Since the introduction of cocaine into surgical practice, now eighteen months, 182 operations for cataract extraction, besides a number of needle operations for soft and capsular cataract, have been performed at the Presbyterian Eye and Ear Charity Hospital under its painless influences. I perform Graefe's modified linear incision without conjunctival flap, which, with the exception of the puncture and counter-puncture, places the incision entirely in the clear cornea. The iris is seized at its pupillary border, from the centre of the corneal opening, and when well drawn out is divided, so that one clip of the scissors usually perfects the iridectomy. This course insures a small, well-shaped pupil. The capsule is opened in its upper front portion, and the lens is pushed out by stroking the cornea upward with a rubber spoon. Should I find the capsule thickened, after clearing away all lens detritus, I pass into the anterior chamber Mathieu's iris forceps and remove by traction the whole capsule. This leaves a beautifully clear pupil. The surface of the eye is then washed with an antiseptic fluid—1 part of the biniodide of mercury to 20,000 of water is what I am now using—a four-grain solution of atropia is put on the cornea, and the lids are closed, after testing vision by counting fingers. I then take a piece of isinglass plaster, about an inch and a half wide and two and a half inches long. It is dipped in the antiseptic liquid, which happens to be conveniently at hand, and when it becomes thoroughly flaccid it is evenly laid over the closed eye from brow to cheek, gently pressing it in at all points by means of a rubber spoon, so as to make it adapt itself thoroughly to the whole surface of the eyelids. Both eyes are closed in this manner if for cataract extraction, only the affected eye if the operation be an iridectomy. In a very few minutes the plaster is dry enough to insure the perfect and permanent closing of the lids.

In the Presbyterian Eye Hospital I have a number of private rooms, so that I can concentrate nearly all of my operations, both for ward patients and private patients, in this building. All operations are performed in the operating-room, on the second floor, on account of the perfect light which I can always secure in it. From the operating-table all patients walk to their rooms, often ascending two flights of stairs to reach them. When put to bed the only instruction given is not to touch the eyes. No restraint is required as to the movements of patients. They are allowed to lie on back or side, as they may find it most agreeable. Operations at the hospital are always performed between two and four o'clock in the afternoon. Patients usually restrict their supper to a cup of tea and some light bread. From the first breakfast there is no restriction put on diet. Patients are allowed to eat anything which they know will agree with them. If any restlessness or nervousness be

exhibited at bedtime, the patient is given a sleeping draught of ten grains of hydrate of chloral and twenty grains of bromide of potassium. It is not often found necessary to continue this mixture after the first night. Each patient has a bell placed on a small table near the bed and within easy reach, so that they may summon a nurse if one is needed for any purpose. Frequent visits are paid to the room by the nurse, and also by the resident physician, but the constant presence of a nurse is never required. Patients are allowed to get out of bed on calls of nature, and sit up in bed to take their meals. The private rooms and wards of the hospital are all curtained with blue shades. These are drawn down to exclude sunlight, but at no time do they make the room so dark that reading may not be indulged in by friends of the sick.

The straps are examined day by day. If they remain firmly adherent and the patient has no pain, the straps are not disturbed. If they become detached they are removed and new ones applied. On the third, fourth, and fifth day a few drops of the atropine solution are put near the edge of the plaster at the inner canthus. The solution works its way along the lashes, and some of it is felt in the eye. Not enough is put on to displace the adhesive strap.

After the second day the patients are at liberty to sit up out of bed, if they desire it. In this regard they can follow their own inclination. If the case has progressed satisfactorily the straps are removed from both eyes on the sixth day. In many cases I have done this as early as the fifth day, without any disturbance of any kind following. As the light has never been excluded from the sick-room during the strapping period, the removal of the diaphanous adhesive straps and the opening of the eyes require no change as regards light. When the eyes are now examined, and the light of the room is sufficient for this purpose without artificial means, one is at once struck with the very small degree of hyperæmia present, and the absence of photophobia and lachrymation. From the very beginning the patient stands the moderate light with no discomfort and with little weeping. When light is not excluded the eye rapidly gains strength, and in a very few days the patient can enjoy the freedom of the house without restraint. In two weeks from the day of operation, as a rule, and in some cases as early as the tenth day, patients are ready to return to their homes, using smoked glasses as a precaution against the sunlight of the street only, but not in the house.

From my recent experiences in treating eyes by this new method, and looking back from this standpoint upon my thirty years' of experience in eye surgery, I am forced to the conclusion that much of the discomfort which patients experience after cataract operations can be truly charged to the surgical dressings and restraining treatment.

In the first place, can any kind of compress and retaining bandage be applied to a recently opened cornea which will at all times, and under the varying positions of the patient's head, while lying in bed, keep up an equable pressure on the eyeball? Grant that the pressure of the ball of elastic raw cotton, which is the most easily adapted of all compresses, when gently secured by the retaining band, is uniform over the entire surface of the lids as the patient leaves the operating-table, the moment the head presses upon the pillow, and especially when the head is moved from one side to the other by the restlessness of patients, a drawing of the bandage is a necessary consequence, making the lid-pressure irregular and disturbing the corneal wound. This has ever been so, regardless of the great variety of head-bands used, and must ever continue under the commonly used methods of dressing. If we recognize the tonicity of the orbicular palpebral muscle, acting upon the thoroughly moulded tarsal cartilage, as the proper eye-splint, and the natural means of securing uniform pressure, then why should we not use it? Retain the eyelids closed by means of a light adhesive strap, an appliance which will not under any condition or at any time change the direction or degree of this tonic support, and we have truly found the means of sustaining the proper adaptation of the edges of the corneal wound for promoting speedy and perfect union. The theory of this is perfectly rational, and experience with this method of dressing eyes after cataract extractions will substantiate its efficacy.

The next point of great and grave importance is the supposed need of darkness for the successful treatment of cataract operations. This has been so earnestly pressed upon us by all authorities and by our own confirmed habits that we are all wedded to the practice. It is a revolution, indeed, to break out of this deeply worn rut in which ophthalmic surgeons in every part of the world are working.

The golden rule for successful surgery is to disturb the natural processes as little as possible, and not excite an irritable condition of the system which might be the starting-point for other and more serious disturbances.

We must all acknowledge that the every-day and all-day exposure of the eyes to light prior to cataract operations, and then the sudden transition to utter darkness of closed eyes, with pads and bandages, in dark rooms, is very positive. Treat healthy eyes in a similar manner, and keep it up for a week, as we do our cataract patients after operation, and what would be the result? When in summer we go from our moderately shaded offices into the noonday sun our healthy, strong eyes feel very unpleasantly the transition, and, as we have all personally experienced, we know it takes some minutes before the discomfort passes off. When we go from a dark room into strong light the effect on the eyes is very disagreeable. If, after one week's incarceration in a dark cell, one is suddenly turned out into the street at midday, the acquired photophobia and hyperæmia would cause pain and weeping, and possibly bring on more serious congestion with destructive inflammation. Yet in a measure this is what we are all doing for our cataract patients. We incarcerate them in utter darkness, and after keeping them there for a given number of days expect good to come from this very unphysiological and unreasonable proceeding. When the bandages are removed, even in a very dark room, the eyes feel sensitive and weep. We expect this, and are never disappointed in finding it, but we have failed to appreciate why it is always so.

When we remove the opaque lens from a patient's eye, with the strong light needful for operation shining directly on his face, he does not complain of the extraordinary brilliancy, because the transition is not excessive. The eye, still smarting under the surgical manipulation, and made irritable by the wounds necessarily inflicted, is not annoyed by the strong light to which it is accustomed. When the patient's eyes are now closed the lids will shut out quite as much light as did the opaque lens, and therefore it replaces the condition which had existed without annoyance for several months prior to the operation, and during which the clouded eye was not inconvenienced by light.

I can readily look back to my early experiences in surgical work when the professional world deemed it necessary in cataract cases, as well as in every other surgery, to prepare the patient weeks in advance by diet, purgatives, and annoying restraints of all kinds, thereby establishing an irritability which led to the very troubles we were so anxious to avoid. These accidents were induced by the professional and well-meaning interferences with a natural and wholesome state. At the present time none of us will hesitate to operate upon a matured cataract a few minutes after the patient enters for the first time the hospital dispensary, with his stomach full of the very recently enjoyed dinner. He feels well generally, and we leave him so, and this for his future good and our credit as modern surgeons. This is a very positive advance from a former surgery. Now let us take another very great jump for our patients' good, and our credit as

modern eye surgeons. Leave our cataract patients in a condition as little disturbed as possible from the state just prior to the operation for extraction. Consider the eyelids, when closed, a sufficient protection to the retina, a substitute for the lens removed, and retain the eyelids closed by as light an adhesive covering as you can find. Any light-colored isinglass admits light freely, and when thoroughly wetted will adjust itself snugly to every part of the lid surface, and when dry will hold on firmly. As patients up to this time have not excluded daylight from their places of abode, let us be careful to surround them with the same degree of light as that in which they have been living. Let the chamber, therefore, be pleasantly lighted and not heavily curtained. The luxury of this treatment to a patient, who, in a former experience, has had his head enveloped by bandages is truly enjoyable, and the friends in attendance about him will certainly appreciate the comfortable surroundings.

I have never seen anything to commend in the annoying restraints imposed by some surgeons on their cataract patients. I know that some are so fearful of jolts and the displacement of the eye-contents that they insist on operating upon patients in the beds in which they expect them to remain, so that the contents of the eye operated upon may not be disturbed by any movements of the body. I have experienced too much inconvenience from bed operations and defective light to continue this bad method, which I have long since discarded. The luxury of an operating-table of proper construction and height, placed where the full light of a large window will fall directly on the face of the patient, will enable the surgeon, placed at his ease, to manipulate so much more skilfully that the patient will therefrom derive much more advantage than he can possibly lose in going from the operating-table to the bed. When in bed, the petty annoyances inflicted by an over-careful surgeon are enough to start a whole train of nervous symptoms in the patient. Here are some of the orders which I have heard given: First, You must lie on your back, and on no condition turn on either side. Now and then a patient bolder than the rest will expostulate, with the statement that they have never been able to sleep upon their backs. The order becomes then the more imperative: You now must, or you will jeopardize the success of the operation. Second order, You must keep quiet and not talk to any one, conversation will excite you. Third order, You must eat nothing for twenty-four hours, for the use of the jaws in chewing food will be very detrimental by interfering with the quiet of the eye; you can have liquid food, but no solid food. Fourth order, You must not sit up in bed to take food during the first few days of treatment, but lying quietly on your back, must suck up the fluid nourishment by a tube. Fifth order, Under no condition must you get out of bed; for all calls of nature the bed-pan must be used, the patient lying down on his back. Sixth order refers to the fact that the eyes must not be touched, and therefore, for fear that an accident might happen during sleep, a band is secured to each wrist and tied loosely behind the back of the recumbent patient, or, as the arms lie on each side of the body, the free end of the night-shirt sleeve is sewed to the body of the shirt as a surety against any accidental movement.

My cataract extractions now number considerably over one thousand, and I take great pleasure in saying that these restrictions, which I have heard given to the patients of others, I have never practised, and yet my per cent. of successes are fully as good as those of my over-cautious surgical friends.

I desire to make the days of confining treatment pass by with as little annoyance to the patient as possible. When put to bed, patients are allowed to lie in any position which comfort induces them to take; to converse when they please; to get out of bed for all calls of nature; to sit up when taking food, and to eat whatever they know from experience will not disagree with them. After the second day they may sit up, if the bed is found irksome. When the adhesive straps are removed, on the sixth day, the freedom of the room is allowed. In a very few days afterward the chamber-door is thrown open, and the patient has the liberty of the house.

The following cases, recently operated upon and treated by the light dressings, and not in dark rooms, will illustrate the new and very much improved method of treating cataract cases:

Case I.—Mrs. McD——, aged sixty-five, in good health, has been blind in the left eye for over one year, and is losing sight in the right. Examination discovered a fully matured cataract, with good light perception, in the left eye, and striations in the right lens. Left opaque lens removed under cocaine, May 10, 1886. Operation smooth, leaving a clear pupil. Both eyes closed by isinglass plaster; patient walked from the operating-table to the contiguous ward, and was there put to bed.

Second day.—Patient had been awakened at night by some pain in the eye, but now feels very comfortable. Straps adhering well, with no moisture about them. No treatment suggested by her condition.

Third day.—Has had no pain since the last visit. Is not inconvenienced by the light of the ward, in which the windows are screened by blue shades. Adhesive straps firmly adherent. No treatment.

Fourth day.—Feels perfectly comfortable, even when the shade was raised from the window to obtain a more perfect examination of the condition of the plasters. A drop of the one per cent. atropia solution was put near the inner canthus, and was soon felt in the eye under the adhesive strap, which was not disturbed. No treatment beyond the application of the eye-drop. Patient was allowed to get up if she desired to do so.

Fifth day.—Found the patient dressed and sitting up. She was in every way comfortable. The adhesive straps were so dry, indicating no eye irritation whatever, that I ventured to remove them without moistening them. The eyes opened at once, and bore the examination and the light of the room without any lachrymation. I was astonished at the small degree of hyperæmia. The appearance of the conjunctiva was as I had seen it in the most successful cases three weeks after extraction. A drop of atropia was applied, and the eyes left without further treatment or protection. No smoked glasses.

Sixth day.—The patient had suffered no inconvenience whatever from the exposure of yesterday and to-day. Eyes not watering. The light of the room well borne.

Seventh to fourteenth days were all repetitions of each other. The operated eye acquired strength, so that by the end of the second week she could go about the house and look out the open window into the sunny street. On this day she was dismissed from the hospital, with instructions to wear a smoked glass when out of doors, but not while in the house.

This was my first case of cataract extraction treated in a light room with a transparent eye-retentive dressing, and the experiment delighted me in the rapidity of the convalescence and the perfect results secured.

Case II.—Joseph R——, aged sixty-one. Left eye operated upon for cataract six years since; pupil so drawn up by the corneal cicatrix that he can only count fingers with this eye. The right eye has still useful vision.

May 10th.—Under cocaine a large iridectomy downward was made. This eye was closed by the broad adhesive strip; the other good eye being left open. He jumped from the table with a jolt, not intended, and walked unaided to the third-story ward. This case was treated throughout as a peripatetic, with the exception of keeping him in bed the day of operation. On the day after the operation I found him dressed, and walking about the ward. He had suffered some pain in the night, but at the time of visit (2 P.M.) felt perfectly com-

fortable. Atropia drops were ordered to be applied daily without removing the dressing.

Fifth day.—Finding the patient going in and out of the ward without any inconvenience whatever, I removed the strap, leaving the eye free, and without smoked glasses. In the conjunctiva there was very little injection, and there was no lachrymation.

This patient could have been discharged from the hospital at the end of the first week, as he stood the ordinary light of the house without annoyance. He was kept a few days longer for inspection, and was discharged on the twelfth day, putting on smoked glasses for the first time when he went out into the sunlight.

CASE III.—Anna S——, aged sixty; double glaucoma with tension + 2; sight steadily deteriorating; counts fingers at four feet; deeply cupped disks; has an old corneal cloud in each eye which necessitated a downward iridectomy in the left, and upward in the right eye. These operations were performed May 11th, and both eyes were closed with adhesive plaster; patient walked up to the fourth story and was put to bed.

Second day.—Patient had pain during the night, but was now comfortable. Straps adhering well.

Third day.—No pain; being cloudy, the patient was not inconvenienced by the light of the room with shades lifted from the windows.

Fourth day.—Patient perfectly comfortable; no treatment.

Sixth day.—Adhesive straps removed. Patient not inconvenienced by the light of the room with shades down. Eyes show very little hyperæmia.

The continued convalescence in this patient was steady, and she was discharged from the hospital on the eighteenth day without the necessity of using smoked glasses at any time.

CASE IV.—John D——, aged fifty. In pulling up a piece of carpet had his left eye perforated by the point of a tack, which entered near the lower corneal margin, perforated the iris, and must have injured the lens, because it slowly became cataractous after the injury. The lens shows plainly striations as an indication of its slow clouding. He has good light perception, and no pain in it. The appearance of the lens is rather from an idiopathic than from a traumatic origin.

May 13th.—Smooth extraction was made under cocaine, and both eyes were closed by adhesive straps. The patient walked up from the operating-room to his chamber in the fourth story, and was put to bed.

Second day.—Found the patient dressed, and sitting on his bed. He had had no pain whatever during the night, and had felt so very well that he saw no reason why he should remain in bed. No treatment.

Third day.—Patient has been up all day, feeling perfectly well; adhesive plasters dry, showing no eye irritation. No treatment.

Fourth day.—Patient continues well. A drop of atropia put at the inner canthus.

Fifth day.—Straps found loose from both eyes. Had suffered no inconvenience. Straps were moistened and reapplied. No treatment.

Sixth day.—Both straps were finally removed, and eye inspected. Very little redness was seen, and no watering during the examination. Eyes left open, unprotected, in the comfortable and moderate light of the chamber.

Eighth day.—As the patient could stand the light of the house without discomfort, he was allowed by the resident physician to go out at midday to a neighboring barber-shop to be shaved, using as a protection smoked glass.

Ninth day.—No inconvenience nor discomfort from the unusual exposure of yesterday.

Fourteenth day.—Patient discharged to-day with a strong, excellent eye. There is some capsular deposits, but in the centre of this is a clear, sharply defined opening, through which excellent vision is obtained. In going out of the hospital he was advised to use smoked glass on the street.

He called at my office five days after he left the hospital. He had on no smoked glasses, and said that he had not put on any on leaving the hospital, as he did not feel the want of them, and had suffered no inconvenience from the sunlight of the street.

CASE V.—Laura W——, aged forty, has been blind more or less for twenty years. One year since she had a cataractous lens removed successfully from the right eye. Although she can get about with this eye, vision is very imperfect, owing to a very pronounced conicity of the cornea. In the left eye the conicity is by no means so marked. The lens in this eye is opaque and white, with good light perception, but no choroidal reflex upon ophthalmic examination. The lens of this eye was removed, under the anæsthetic effects of cocaine, on May 13th. After all the lens substance had been forced out by pressure, a thickened capsule remained, which was drawn out by forceps, leaving a brilliant, clear pupil. Both eyes were closed by isinglass plaster, atropia drops having been previously instilled. She walked from the operating-room to her bed in the fourth story.

Second day.—Complained of much pain during the night, and still has some. The adhesive straps are not wetted, showing but little lachrymation, and are, therefore, not disturbed.

Third day.—Patient has passed a good night, and all pain has disappeared.

Fourth day.—Patient very comfortable and straps well adherent; a few drops of atropia were put near the inner canthus.

Sixth day.—Patient having had no trouble the straps were removed; the eye was found strong for moderate light, and with very little hyperæmia.

Tenth day.—Patient is moving about the house with no inconvenience from light; she has a clear pupil and excellent vision.

Eighteenth day.—Patient returned to her distant home to-day, having had a perfect result from the cataract extraction. She was advised to use smoked glasses for out-of-doors, and not for the house; but as she can face the sunlight of the window she does not seem to think the protection necessary.

CASE VI.—Mrs. B——, aged fifty; cataract fully formed in right eye; forming in left; general health good; had cataract extracted to-day, May 15th, under cocaine. The operation was painless and smooth, leaving clear pupil and the ready counting of fingers. Atropia, four-grain solution, was instilled, and both eyes were strapped. She walked to her room on the same floor as the operating-room, and was put to bed.

Second day.—Has had no pain, and is perfectly comfortable.

Third and fourth days were duplicates of the second, painless and comfortable. An atropia drop was used each day without disturbing the straps, allowing it to be sucked along the lashes by capillary action.

Fifth day.—The patient having had no pain whatever from the day of operation, I anticipated the removal of the dressings by one day, and removed the straps. The exposure of the light of the chamber caused no uneasiness or lachrymation; there was very little conjunctival injection, and objects could be very readily recognized.

Sixth day.—No trouble; patient walks about the room without inconvenience.

Ninth day.—Patient suffers so little inconvenience that she has the freedom of the house without glasses.

Twelfth day.—With $2\frac{1}{2}$ + lens patient reads brilliant type.

Fifteenth day.—Patient returned to her home using a pair of light blue glasses as her sole protection from strong light.

CASE VII.—Miss O——, aged sixty-two, was born with small zonal cataracts, and therefore has never en-

joyed good sight. They have been slowly developing, so that for twenty-three years she has not been able to read the largest book-type. Now she counts fingers with each eye at four feet. On ophthalmoscopic examination choroidal reflex is seen in each eye. The deposit in the lens seems chiefly at the central region, with some clear substance in the anterior and marginal layers. She had travelled five hundred miles, and was very anxious to be operated upon, yet the cataracts were not sufficiently matured. She accepted the proposition and the risk of having one of them ripened by being needled under cocaine, on May 15th. This eye alone was closed by adhesive plaster, after being well soaked with an atropia solution.

Second day.—No trouble whatever from the corneal and lens puncture of yesterday; applied the atropia solution.

Third day.—Removed the plaster; eye not reddened, but the effect of needle-puncture upon the lens very perceptible; pupil well dilated from atropia.

Fourth day.—Lens ripe for extraction. Operation on this left eye was smooth, and fingers were readily counted after the extraction; atropia applied, and both eyes strapped; patient walked from operating-table to fourth story, and was put to bed.

Fifth day from needle operation, and second day after extraction.—Patient had some pain in the night, but the eye feels easy now; straps not moistened from any lachrymation; atropia drop put at inner canthus

Third day of extraction.—Patient very comfortable; the light of the room is sufficient to allow her sister to read to her and write for her; no treatment.

Fourth day.—A duplicate of yesterday; no discomfort of any kind, and no treatment required beyond the atropia drop.

Fifth day.—Patient so perfectly comfortable, and adhesive straps so dry and undisturbed, that I ventured to remove them. I adjusted the curtain of the room to exclude a little of the light, not that the light was complained of, but on account of my own timidity, as the eye had undergone two operations at a short interval.

Sixth day.—Patient had some pain in the night, and found the eyelids glued up this morning; they were washed open with warm water. Since awaking they have given no pain, yet there is a slight tendency to lachrymation; the one per cent. of atropia was applied, but the light of the room was not reduced.

Seventh day.—Eye strong, no more watering nor discomfort. Patient moves about her room with freedom.

Tenth day.—The eye looked so remarkably well today, so free from congestion, that I tested vision, and found that with a lens she could read the title-page of a book, the first letters she has seen for twenty-three years. The ordinary light of the room when the shade was run up caused no inconvenience.

Thirteenth day.—Patient ready for dismissal. With cataract glasses and without the protection of smoked glasses she can look into the sunny street and read signs on the opposite houses. There is no congestion of any kind in the eye operated upon. The appearance of the conjunctiva is as white in this eye as in the other, which has not been disturbed. In each it is perfectly normal.

Case VIII.—M. G——, aged eighty-eight, and very feeble, has had cataracts in each eye fully matured for some time. He is anxious to see again and has sought my advice. I recommended an operation because there was no risk to life, and if the operation failed he could be no worse off than at present. May 19th, under cocaine, the lens was removed from the right eye, both were closed by adhesive strips, and the patient walked to his bed in the fourth story. As he was very feeble, and had been annoyed by a bad cough for one year, he was kept in bed till the sixth day. Each day he reported no trouble, no eye uneasiness of any kind, and the clean straps well adherent to the lids were an endorsement of his statements. His cough was controlled by ipecac and opium.

Sixth day.—When the straps were taken off he saw my face at once, in evidence that the operation had been successful. The eye was not injected to any extent, and as there had been no mattering, the lashes were not glued together to interfere with immediate opening. Atropia solution applied.

Seventh day.—The eye caused him some uneasiness last night, and is watering a little to-day. Atropia drops were ordered, but no diminution of the light in his chamber. His vision was clearer, notwithstanding the discomfort of the preceding night.

Eighth day.—The lids of both eyes show some slight hyperæmia and some sticking together this morning; both eyes equally affected and with slight conjunctivitis.

Fourteenth day.—Patient left the hospital to-day with good sight. There is still some little conjunctivitis in each, quite as much in the eye not operated upon as in the one from which the lens was removed. It gives him but very little inconvenience. He was advised to put on smoked glasses for the street.

Case IX.—Elizabeth S——, aged fifty-one, had had cataract extracted from the left eye six months since. Cataract forming in the right. Good vision was prevented in the eye from which the lens was removed by the presence of a thickened capsule. The pupil was free, and expanded well under atropia. May 20th, under cocaine I openèd the cornea from above, and with Mathieu's iris forceps extracted all the capsule. It came out *en masse* and left a brilliant pupil. Atropia was applied, and both eyes closed by isinglass plaster. She walked to her bed in the fourth story of the hospital.

Second day.—Had had some pain during the night but was now free. Straps dry and adhering.

Third day.—Very comfortable; atropia drop.

Fourth day.—Found the straps curling up. Removed them and applied fresh ones, also used the atropia drop.

Fifth day.—Removed isinglass plasters from each eye. The eye shows no irritation from the shaded light of the room; atropia instillation.

Sixth day.—Eye strong, no pain, very little injection.

Eighth day.—Patient has the freedom of the house, and goes about without inconvenience and without smoked glasses, and she is ready to leave the hospital.

During the months of May and June, 21 cataract extractions and 4 iridectomies have been treated by this new method at the Presbyterian Eye and Ear Charity Hospital of Baltimore. The progress of all these cases has been so satisfactory that I have every reason to expect a continuance of these good results. From my experience, I think that I can confidently say that I will not again have use for compresses, bandages, and dark rooms, as elements of treatment in cataract extraction.

Extract of Calabar Bean in Epilepsy.—Dr. Rusche recommends the exhibition of calabar bean in epilepsy and allied affections, and says he has found it to render great service in cases in which the bromides and atropine have been ineffectual (*Deutsche Medicinal-Zeitung*, May 10, 1886). He notes the curious circumstance that better results are obtained by alternately increasing and diminishing doses than when the same quantity is given continuously. The drug is to be given in the following preparation: Extract of calabar bean, 7½ grains; spirits of sulphuric ether, 75 minims; peppermint-water, 5 drachms. Dose: 5 to 10 drops for children, 8 to 15 drops for adults, three times a day. The smaller dose is commenced with the first day, and one drop added each day until the maximum is obtained, and then the quantity is diminished by a drop each day until the minimum is reached. The writer reports a number of cases in which excellent results were obtained.

Professor von Arlt, the well-known ophthalmologist of Vienna, recently fell in the street and sustained a fracture of the left humerus.

Clinical Department.

TWO CASES OF SPASMODIC STRICTURE OF THE URETHRA RELIEVED BY FREE MEATOTOMY.

HOBART CHEESMAN, A.M., M.D., New York, Clinical Assistant for Venereal Diseases at the New York Post-Graduate School and Hospital, sends us the following: "The following two cases of spasmodic stricture of the urethra seem to me excellent examples of a class of strictures supposed to be due to reflex irritation. In these particular cases the reflex evidently had its origin in the irritation caused by a too narrow meatus urinarius. Why a meatus of a size which in many persons is seen to exist without causing irritation or exciting any symptoms, should occasionally, in an individual, give rise to very evident and serious symptoms, is a problem which had better be left to the tender care of more profound intellects. That such is the case experience supplies abundant proof. It should not, however, be inferred from this that every patient suffering from deep spasmodic stricture, and who has a smallish meatus, will be cured by incising it freely. There are reflexes arising from various well-known sources, other than the meatus, capable of producing the same result. A small meatus, when encountered in such cases, should be treated with only as much respect, and as great consideration, as a full and critical examination of all the facts in evidence justify. Therefore I may not be understood to advocate by these cases meatotomy for every case that presents with a meatus too small to admit the passage of a number 32 or 34 F. bougie à boule. But what is aimed at is to call attention to the fact that, perhaps oftener than is generally admitted, the free incision of a smallest meatus—and that, too, even when there has been no inflammatory process at work to cause unnatural narrowing of it—will remove grave and, may be, persistent symptoms as by magic. I think this is well shown in the following cases, which are presented, not as being unique, but as being remarkably good illustrations of the type.

"CASE I.—H. M——, American, aged twenty, theological student, July 15th. Has had various nervous symptoms for ten days, such as pricking sensation over the surface of the body, and cold and blue extremities, and for thirty-six hours has been unable to pass his urine, while at stool even; but it has been drawn by an elastic catheter. For three or four days has had diarrhœa and occasional vomiting. Denies having had any venereal disease. Examination shows a rather small meatus urinarius, admitting snugly through it No. 23 F. steel sound, which also passes readily into the bladder, but it is moderately hugged in the deep portion of the urethra. The urine is drawn with a 20 F. gum elastic catheter. Examination of the urine shows nothing abnormal except a little albumen. The diarrhœa and vomiting being speedily controlled, treatment was directed to the nervous symptoms and the retention of urine. A spinal ice-bag soon restored the circulation to the extremities, and under bromide and quinine as a tonic the other nervous symptoms abated; but the retention of urine continued unaffected, although all the usual means of relief were employed. On July 26th, eleven days after my first attendance, not a drop of urine having passed his urethra, even when at stool, except per catheterem, I incised the meatus so as to admit the passage through it of No. 30 F. bougie-à-boule. No. 28 F. bougie-à-boule could then be passed down to the triangular ligament, and withdrawn without detecting stricture.

"The next day the patient passed urine while at stool, but was unable to start the stream at other times until on the 29th, when he passed it freely and regularly, and continued to do so unimpeded thereafter. On September 28th, two months later, he was still suffering intermittently from the nervous symptoms, but had had no further difficulty in passing urine. I have not seen him since that date.

"CASE II.—S. W——, American, aged fifty-eight, marketman. Seen for the first time on October 3d. Had gonorrhœa several times, the last attack occurring over twenty-five years ago. Treated each time by injections. Ever since the last attack has suffered more or less from frequent micturition, and the stream has been small; never suffered much pain. For the year past has had to get up at night every two hours to urinate, and during much of this period the act has been accomplished only after much straining, and by driblets. This is his present condition. Examination of urine shows nothing abnormal, except a moderate amount of mucus.

"Examination of the urethra on October 11th: Meatus admits snugly No. 22 F. steel sound, which is arrested at six inches. No. 18 F. is arrested at seven inches. After many futile efforts to cause an instrument to enter the bladder, finally a fine whalebone was made to enter by being passed down by the side of a No. 4 F. elastic bougie. On the 14th, and a third time on the 16th, the same trials were made to enter the bladder, but with no better success; the same fine whalebone being the only instrument that could be made to enter, although the attempt was made by two surgeons besides myself. No. 18 F. steel sound was resisted at six inches, but could be urged on an inch deeper, where it was firmly grasped and effectually arrested. The meatus was then cut (on October 16th), so as to admit the passage of No. 34 F. steel sound. No. 18 F. steel sound then passed, with very little urging, through the deep stricture and entered the bladder, followed, in course, by Nos. 22, 24, and 27 F. No further trial was then made. The next day Nos. 27 and 29 F. steel sound passed easily, and entered the bladder; the patient declared that he had got up but twice during the past night to urinate. It had been his custom to get up five or six times. October 27th, Nos. 27 and 30 F. sounds passed easily, but some resiliency of the deep urethra persists, as shown by its continuing to grasp the sound slightly. The patient continues, since the operation, to pass his water about every four hours. On October 28th, after holding it three hours, it was passed in my presence. The stream started freely, was full and strong, and uninterrupted; in other words, a perfectly normal one. He remained under observation for six weeks after this date, but had no more trouble in passing his urine. Since then I have not seen him."

A CASE OF RUMINATION.

DR. W. A. HUBBARD, of Bloomfield, N. Y., writes: "In a recent editorial in THE RECORD on 'Rumination in Man,' you say that it 'is not unlikely that the affection may be beneficial rather than otherwise to its subjects, and the food, if not subjected to a second mastication and admixture with saliva, might put too great a tax on the stomach and thus excite gastric troubles.' I take from my note-book the history of the following case, which is not only an addition to the small number of recorded cases of the kind, but also a verification of your conjecture relative to the gastric disturbance that might occur in case of its suppression: D. I.——, farmer, aged thirty-five, of Irish descent, consulted me in April, 1885, for, as he expressed it, the restoration of his 'lost cud.' He had contracted the habit at a time beyond his recollection, and had had no intermission in its practice until one month previously, when it had suddenly ceased and was immediately followed by dyspeptic symptoms. He had constant nausea, although vomiting he found to be impossible. It had been his habit to swallow his food hurriedly, with as little mastication as possible, and retire from his family or associates, after which the process of regurgitation immediately began and continued for twenty or thirty minutes. This retirement was necessary for the perfect digestion of the food. He had been an enormous eater, and his health had been perfect until the

sudden stop in this peculiar physiological process occurred. I informed him that his request was undoubtedly unique, and suggested the thorough mastication of his food previous to deglutition; but this, owing to habit and forgetfulness, seems impossible, and he still continues dyspeptic, despite the usual remedies given to aid digestion, and lives in the expectation that his habit will return as suddenly as it left him."

A CASE OF HYDROMETRIA.

Dr. E. J. Cowden, of North Warren, Pa., reports the following case: On December 4th he was called to see a young lady, single, aged nineteen, who had always enjoyed good health up to that time. She began to menstruate at thirteen, and had been regular, her last period having been on November 1st. She took a severe cold in the latter part of this month, and was found to be suffering from the usual symptoms of suppression. Various emmenagogues, including permanganate of potassium, were given from time to time without effect. In the latter part of February it was noticed that the abdomen was gradually increasing in size, and this continued until she began to attract the attention of the neighbors. Dr. Cowden made a careful examination, but could detect nothing that would warrant a diagnosis of pregnancy. The womb was large and distinct fluctuation could be obtained on palpation, but no passive movements could be felt, neither could ballottement be elicited. There had been no morning-sickness, and the breasts were not changed. The patient was also examined by Dr. John Curwin, who confirmed the writer's negative diagnosis, and by one of the most prominent surgeons of Northwestern Pennsylvania, who pronounced the case one of pregnancy at about the sixth month. From this time the patient lost flesh very rapidly, and the abdomen continued to enlarge. Dr. Cowden again made an examination, but could detect nothing but fluid. On June 13th, as the patient arose in the morning, there was a gush of colorless fluid nearly filling the chamber-vessel. A slight flow continued until the second morning following, when about nine quarts of the same colorless fluid came away in a torrent. The uterus rapidly descended into the pelvic cavity, and the patient's health is now gradually improving and recovery is hoped for.

TREATMENT OF ASPHYXIA OF THE NEWBORN.

Dr. J. C. Roberts, of Pulaski, Tenn., writes that he was struck with the description given by Dr. L. N. Sharp, in The Record of July 3d, of his method of resuscitating asphyxiated infants; and, while yielding to Dr. Sharp the priority of publication, he desires to add his own testimony as to the value of the procedure. He was called one night in consultation with his brother to a case of twin labor. The first child had been born some two or three hours, but the second was presenting by the shoulder and a loop of the funis had fallen down. As there was no perceptible pulsation in the cord, the heart-sounds could not be heard, and the movements of the child had ceased, it was supposed that it was dead. The woman was brought under the influence of chloroform, turning was performed, and the child delivered with the forceps. The ordinary methods of resuscitation were employed, but the child gave only one or two spasmodic gasps and then apparently died. Dr. Roberts continues: "The thought struck me that, as we had used chloroform, I would as a last effort employ the treatment for threatened death from this anæsthetic. I seized the child by the feet and suspended it perpendicularly, and, to my astonishment, as soon as the blood gravitated to the head, which was made apparent by the change of color in the face, the child at once gasped. The second gasp was followed by a loud and continued crying, and the life was saved. Since that time I have resorted to the same plan in several cases of asphyxia of the newborn, with immediate and happy results."

A WANDERING TAPEWORM.

Dr. W. Davidson Bidwell, of Leavenworth, Kan., writes that a short time since a lady from the country brought him her boy, three years of age, with the account that he had passed several pieces of tapeworm during the past two months, and had become feverish and sickly. At bedtime a dose of castor-oil was given the boy, and the next morning fifteen minims of oleoresin of male fern in five-minim capsules, at intervals of one hour, another dose of oil being given in the afternoon. That evening the child passed a very long worm. A piece about a yard long became detached from the rest, and this piece, which tapered nearly to a point at one end, moved off, pointed end first, across the floor some six feet, and had climbed up the smooth side of the wall a distance of two and a half feet before it was discovered. The rest of the worm was noticed to wriggle some, but did not attempt to crawl away. During the two months that the child was passing portions of tapeworm large numbers of pinworms were noticed almost daily in the evacuations. Dr. Bidwell asks whether such motions of a tapeworm outside of the body are often observed, and also whether it is common for the two kinds of worms to be associated?

ABORTIVE TREATMENT OF MAMMARY ABSCESS.

Dr. Llewellyn Eliot, of Washington, D. C., sends us the following: "About fifteen years ago I witnessed the beneficial effects of the free application of spirits of turpentine to abscesses and whitlows in their early stages. The result in each case in which such applications were employed was a drying up and disappearance of all traces of inflammatory or suppurative processes. From the earliest years of my professional life this has been a routine treatment with me, and, arguing from analogy, it has been adopted in cases of mammary abscess when seen in its incipiency. The only disadvantage attending this treatment is the odor of the turpentine, which is of no importance when contrasted with the intense pain, sleepless nights, and suffering accompanying suppuration of the gland.

"If, upon the discovery of a drawing pain upon suckling, or a tender, hard spot in any part of the gland, the part be bathed with the spirits of turpentine, and then covered with a cloth, rag, or piece of flannel saturated with the same, we may, as a rule, look for the disappearance of the hardness, the tenderness, and all other uneasiness attending this troublesome affection, in the course of two or, at the most, three days. During the course of such a treatment the child may be nursed from the affected breast, but not as frequently as from the well one. It is hardly necessary to say that all traces of turpentine should be washed away before such nursing. The amount of milk secreted has never appeared lessened in the cases observed, nor have any of the ill results of the continued use of turpentine followed either in the mother or in the child.

"Whether this manner of dealing with this affection be in general use or not cannot be said, still there is no mention of it in many of the recent text-books on obstetrics. It is not claimed to be infallible, but its application will be attended with no bad results even if it be unsuccessful. Strapping, pressure, rest, applications of belladonna and soap-liniment, and the continuous application of an ice-bag, are among the various modes of treatment employed, but my faith now centres around the application of turpentine as an abortive of mammary abscess."

Progress of Medical Science.

Ulcerative Endocarditis.—In an elaborate study of ulcerative endocarditis, in the July number of *The American Journal of the Medical Sciences*, Dr. Byrom Bramwell records fourteen cases in all of which the aortic valve was affected, either alone or in combination, the mitral in six, and the tricuspid in one. In two of the three cases in which well-marked acute croupous pneumonia was present, he detected micrococci in the exudation filling the air-cells of the lung, but he failed to satisfy himself that they were identical with the micrococci in the cardiac vegetations. The frequent association of acute croupous pneumonia with ulcerative endocarditis is a point of great interest, but Dr. Bramwell's observations on this point have not been sufficiently extensive to enable him to form a satisfactory judgment; but his pathological experience clearly shows that during certain seasons acute croupous pneumonia and ulcerative endocarditis are apt to prevail. The detection of micrococci in the inflamed cerebral meninges, and in the vessels and substance of the cerebral cortex, and the presence of disseminated patches of cerebritis and acute cerebral softening, are very interesting; and afford a satisfactory explanation of the nervous symptoms which are so prominent in some cases of the disease. Mr. A. W. Hare, in response to Dr. Bramwell's request, undertook an experimental investigation to determine the relationship of ulcerative endocarditis to other infective conditions. The results which he obtained, and which are detailed in the paper, are, for the most part, negative.

The Treatment of Freckles.—The following procedure is recommended by Dr. Halkin: The skin being washed and dried is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration, which is soon replaced by the normal color of the skin.—*American Practitioner and News*

The Function of the Recurrent Laryngeal Nerve.—The mode of action of this nerve, supplying muscles so important in their use, both phonatory and respiratory, and yet so opposed in their action, is a much mooted point upon which Dr. Frank Donaldson, Jr., endeavors to throw additional light, in an experimental paper in *The American Journal of the Medical Sciences* for July, 1886. The recurrent laryngeal nerve supplies all the intrinsic muscles of the larynx, with the exception of the crico-thyroid, and it is chiefly a motor nerve. It is a physiological fact that the internal thyro-arytenoids, the lateral crico-arytenoids, and the transverse arytenoids are the adductor (the phonatory) muscles of the larynx, and that the posterior crico-arytenoids are the abductor (the respiratory) muscles of that organ, and all these muscles receive their nerve supply from the recurrent laryngeal. This nerve, then, must contain two sets of fibres, which innervate muscles of separate and distinct functions. How, and under what circumstances, does the constrictor or respiratory function of this nerve assert itself, is the important question to be answered. As the result of his experimentation and study, Dr. Donaldson explains the innervation of the larynx somewhat as follows: Breathing is an involuntary act, though the diaphragm and all the other muscles employed in respiration are voluntary muscles; and though respiration may be modified within very wide limits by the will, yet we habitually breathe without the intervention of the will. The larynx is an essential part of the respiratory apparatus, and is immediately connected with, and must receive impulses from, the respiratory centre in the medulla, and its respiratory function is the most important; for the purpose of preserving life the glottis must be kept open, and so we find that the cords, even in normal breathing, at each inspiration are pulled slightly away from their apparently normal position between extreme abduction and extreme adduction. The fact that in deep narcosis the cords are pulled widely apart, would seem to show that stronger stimuli than usual are proceeding from the respiratory centre to the abductor muscles; for in all deep narcosis the tendency is toward dyspnœa, and always in this condition normal respiratory muscles are called into greater play. The constrictors of the larynx are apparently always in a state of partial tonic contraction, and ready for use at any moment; and the respiratory function of the larynx being for the moment in abeyance, the protective or constrictor function of that organ asserts itself. Again, it is well known that great changes can be brought about in the respiratory movements by the will; while, on the other hand, the respiratory centre is the one most frequently affected by nervous impulses from various quarters. He thinks that his experiments support the supposition that both the respiratory and constrictor (or protective) functions of the glottis are governed by those laws which govern the rest of the respiratory apparatus. The larynx, being part of the general respiratory apparatus, its inspiratory and expiratory (constricting) functions are under the same nerve control as the rest of the organs concerned in inspiration, and under no circumstances are these functions suspended. There seems to be a similarity between the nerve fibres of the recurrent and those of the pneumogastric; the two sets of fibres of the recurrent supply opposite sets of muscles, and may be likened to the two kinds of nerve fibres composing the pneumogastric—the one answering to less, the other to stronger stimuli.

Connection Between Scarlet Fever and Heart Disease.—The following are the conclusions formulated by Dr. Henry Ashby, in a lecture on this subject published in *The Lancet* of May 22, 1886: 1. In uncomplicated cases of scarlet fever, lesions of the heart are very rare. 2. Endocarditis is quite exceptional in scarlatinal synovitis; pericarditis occurs more frequently. 3. Acute or subacute rheumatism occasionally supervenes during convalescence from scarlet fever; an attack of scarlet fever may also be the exciting cause of a relapse; in such attacks peri-endocarditis is frequent. 4. Peri-endocarditis occasionally occurs in scarlatinal pyæmia. 5. Dilatation without valvular disease very frequently occurs in scarlatinal nephritis; peri-endocarditis and embolism are by no means uncommon.

Paraplegia and Anæsthesia of the Legs.—At a recent meeting of the Midland Medical Society, Dr. Suckling read a paper on certain forms of paralysis and their treatment by faith-cure. He showed a woman who had been sent to him suffering from paraplegia and anæsthesia of the legs, following a fall five months previously. She was of the neurotic type; cheerful, intelligent, energetic, industrious, and eager to get well. After being informed that the application of electricity would cure her, faradization was employed, resulting in recovery.

Incarcerated Umbilical Hernia.—Although umbilical hernia is not an affair of rare occurrence, the incarceration of the intestine in this situation is very uncommon. Dr. F. J. Zielewicz reports, in the *Centralblatt für Chirurgie* of June 5, 1886, the case of a child, eight months old, well nourished and healthy, who was noticed to have a small umbilical hernia shortly after birth. This was treated by a bandage applied by the midwife. One day, while the child was crying, the hernial tumor suddenly increased in size. The mother was unable to replace the intestine; the child refused to eat; could pass nothing at stool, and began to sink rapidly. The next

day the little patient vomited several times, and the abdomen grew very hard and tense. The tumor was the size of a pigeon's egg, of a bluish color, and was irreducible. Herniotomy was performed, the skin over the tumor was incised, and the gut was released only after three incisions had been made in the borders of the ring. The edges of the skin, together with the hernial sac, were brought together and held in apposition by a number of close sutures, and the wound was dressed antiseptically. The child made a rapid recovery, and the hernia was radically cured. Another case is reported by Dr. Emerich Thoman, in the *Allgemeine Wiener Medizinische Zeitung*, No. 20, 1886. The patient, a married woman, forty-two years of age, had noticed a prominence of the umbilicus since the birth of her last child, twelve years before. One day, after exposure in a cold rain, she had a chill, but being very hungry ate heartly of solid food. Soon after she began to suffer from colicky pains, nausea, vomiting, and chilliness. These symptoms increased in intensity for four days, during which time there had been no movement from the bowlels. The writer first saw the patient at this time, and found a small umbilical hernia, the parts about the ring being swollen and inflamed. He succeeded in reducing the hernia by gentle taxis, and the patient immediately expressed herself as greatly relieved. Shortly afterward the bowels acted, the symptoms of strangulation subsided, and the woman felt a desire for food, and slept for the first time in four days. There was still, however, considerable inflammation in the neighborhood of the ring, and the patient was ordered to keep perfectly quiet in bed, and to take none but liquid food. She felt so well, however, that she disobeyed these injunctions and got up to wash and go to stool. Almost immediately symptoms of severe general peritonitis set in, the patient went into a collapse and died within a few hours. Dr. Thoman believed that the peritonitis was caused by perforation. The inflammation occurring during the period of incarceration of the hernia had given rise to adhesions, and the intestine being softened the movements of the patient had caused the rupture of the walls of the gut, and gas and fecal matters then escaped into the peritoneal cavity.

Myriapods in the Intestine.—Dr. Rooms reports the case of a boy, eleven years of age, who suffered from nervousness, a feeling of peculiar and painful movements in the abdomen, became very pale, and acquired a dislike to milk and fatty articles of diet. A dose of some ordinary anthelmintic caused the expulsion of some ascarides, but no improvement in the symptoms followed. The boy was much better in the winter, but the same symptoms made their appearance again the following summer. The same thing occurred the next year. One day the patient chanced to take, fasting, some juniper-juice with wormwood, and soon after discovered some live myriapods in the stools. A decoction of artemisia was now given as a medicine, and a number of the myriapods were expelled, and the boy became much better. The following summer the same symptoms reappeared. After a double dose of wormwood numbers of the myriapods were expelled at stool, and by vomiting, and from that time the boy remained well. Professor Plateau diagnosed the myriapod as *Iulus Londiniensis*, which sometimes lives in the intestine as a pseudo-parasite, its presence there coming probably from the eating of raw fruit.—*Centralblatt für klinische Medicin*, June 5, 1886.

A Rare Case of Hydrocele.—Dr. C. A. Dethlefsen reports the following case in the *Hospitals-Tidende* of June 9, 1886. He was consulted in November, 1882, by a man, thirty-four years of age, suffering from a hydrocele. The affection had begun twenty years before, without any apparent cause, by the appearance of a swelling in the left half of the scrotum. Some years later, while he was riding on a horse, considerable pressure being made on the tumor, he suddenly felt a sharp tearing pain shooting upward in the direction of the left inguinal canal; this soon subsided, however, and gave him no further trouble. The tumor then began to grow larger, and some time later a swelilng was noticed in the abdomen. The latter caused him considerable inconvenience, and sometimes prevented him from working. He was treated for some time with external applications of iodine, but without success, the tumors in the scrotum and the abdomen both continuing to increase in size. Examination showed the left half of the scrotum distended by a smooth, translucent tumor, the size of a child's head, tapering upward into the inguinal canal. The abdomen was distended, and a hard, smooth tumor, reaching up an inch above the umbilicus, could be felt on palpation. The size and shape of the swelling suggested a gravid uterus at the seventh month. Percussion on the scrotum was followed by an impulse communicated to the hand placed over the abdominal tumor. The scrotal sac was laid open and a drainage-tube, about twelve inches in length, was passed up to the fundus of the abdominal sac. The latter was then washed out every few days with carbolized water, and gradually contracted until at the end of six or seven weeks it could be felt as a hard tumor, the size of a large hen's egg, lying against, and plugging up the internal inguinal ring. A few months later the patient again presented himself with a scrotal hernia. This could be reduced with great ease, and examination revealed the fact that the plug had disappeared from the entrance of the canal. In the scrotum, however, could be felt a rather firm mass, which the author supposed to be the shrivelled remains of the original sac, driven down by the hernia through the canal. A truss was applied, and the patient was dismissed in good condition. It would appear that the fluid was first effused within the tunica vaginalis testis, and the tumor, having attained a large size, had forced a passage, like a reversed, hernia, through the inguinal canal into the abdomen, where there was room for a further enormous development.

The Open Treatment of Abdominal Tumors with Fluid Contents.—Although a large proportion of abdominal and pelvic tumors with fluid contents are now curable by means of extirpation, there yet remain some which are not amenable to this mode of treatment. Among these are suppurating tumors of the mesentery; hæmatocele, resulting from pelvic peritonitis; cysts of the spleen, liver, and pancreas; dropsy of the gall-bladder, etc. Formerly such tumors were punctured, the cannula being left *in situ*. Dr. Péan claims (*Gazette des Hôpitaux*, No. 33, 1886) to have been the first to make a large incision into the sac and thoroughly empty it, thus promoting rapid healing and preventing septic infection. A free incision is made in the skin, the sac of the tumor is drawn out as far as may be, and, if possible, attached to the opening; the sac is then incised, emptied, disinfected, and a drainage-tube is inserted. In the last twenty-one years the writer has performed this operation fifty-seven times, and his experience has led him to regard it as the safest mode of treatment for such fluid tumors as cannot be extirpated, and far preferable to simple tapping and drainage.

Removal of a Sliver from the Eye by Suction.—Dr. R. E. Curran writes as follows in the *Southern California Practitioner* for May, 1886: A friend applied for relief the other day with "something in his eye," which amateur efforts had failed to find or remove. Reflected light showed a foreign body on the cornea, and a magnifying glass revealed the fact that a splinter of steel had penetrated the conjunctiva obliquely, and was entirely covered. Attempts to remove it with the spud were unsuccessful, and there was danger of perforating the cornea; but while applying solution of cocaine with dropping-tube the idea of *suction* was suggested, and covering the wound with the mouth of the dropping-tube, and with a gentle reverse motion of the bulb, I was happily successful in the first effort.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE OUTCOME OF THE DISCUSSION BEFORE THE ACADEMY OF MEDICINE OF PARIS.

WE noticed in these columns some time ago the discussion which was then being carried on in the Paris Academy of Medicine, concerning the relationship of microorganisms to disease. The discussion is now closed, after having dragged along for upward of three months, and, as is usual in such contests, the participants occupy nearly the same position that they did at the outset. M. Peter and his followers regard the microbes of all shapes and sizes as innocent parasites, incapable of setting up diseased action in any of the tissues, while his opponents, who were largely in the majority, still hold to the new theories of the etiology of disease, and are in no way shaken in their belief by the arguments of their adversaries.

But while in the main the discussion was fruitless, except as it led to perhaps a rather clearer and fuller statement of the doctrines of leucomaines and microbes than we have yet had, it has nevertheless resulted in the development of a new theory, that of microzymes. The theory may be characterized as an attempt to reconcile the two antagonistic doctrines by a compromise. M. Béchamp was the engineer who endeavored to construct this *via media* over which the two armies, reunited under a common flag, might be made to pass. But we question whether this truce can be brought about.

The new theory, briefly stated, is as follows: Every cell, of whatever kind it may be, whether blood-corpuscle or epithelial cell, is made up of minute granules, as they appear under the microscope, which, while constituting the cell, or a part of it, are really independent entities. They are not destroyed with the cell, but remain and become developed and assume new forms and new characteristics, according to the varying circumstances under which they may chance to be placed. These developed forms are the microbes, and to the same forms in their chrysalis state, if we may be allowed the expression (the granules of which the cells are composed), M. Béchamp gives the name of microzymes. It depends entirely upon the conditions under which these granules begin their independent existence whether they become virulent or innocuous. When growing in certain media they are harmless, while at the same time they preserve their characteristics to such an extent as to enable them to make a sufficient impression upon their host to render him impervious to the attacks of their more dangerous cousins. In this way the author explains the principle of protective inoculations against disease. But the same microzymes, under other less favorable conditions, may assume most dangerous forms and become the direct exciting cause of morbid action.

This theory, like almost all theories when ably presented, possesses a certain fascination. It seems to fit, as it were, into various lacunæ which the other theories have left unfilled. But it has very weak points, and these, obviously, are the premises. The author must first prove to us that there are such things as microzymes, and then that they are capable of development into microbes. A committee has been appointed by the Academy of Medicine to examine into M. Béchamp's methods of research, and to settle the question of the existence of the mycrozyme, if it can. We shall do well to wait and learn what the committee has to say before we assume that these minute granules are the germs of pathological microorganisms.

THE TREATMENT OF ERYSIPELAS.

MANY and various are the methods which have from time to time been vaunted as specifics, or at least as invaluable aids, in the treatment of erysipelas. Of all these the antiseptic methods have found most favor in recent times. External applications of tar and of carbolic acid, subcutaneous injections of carbolic acid, and multiple incisions and scarifications, designed to permit of ready access of the antiseptic remedies to the diseased parts, may be mentioned as the most direct methods. Other and less disagreeable means of exhibiting antiseptics are through the stomach.

In the *Centralblatt für Chirurgie*, No. 19, 1886, Dr. Haberkorn speaks very highly of the internal administration of benzoate of sodium. He thinks this drug has been abandoned too rashly after the disappointment following its use in pulmonary phthisis, and believes that it is a very useful remedy in infectious diseases, more especially the exanthemata. He employs it in erysipelas in doses of from four to five drachms per diem, given in mucilaginous suspension or in seltzer water. In nearly every case in which the drug was so used the temperature fell to the normal within forty-eight hours, and a corresponding improvement was noted in the other symptoms. No local applications were used at any time.

The number of cases thus treated was upward of fifty, and none resulted fatally. In two cases in which improvement was at first slow, a very favorable change occurred after the dose was increased. The patients do not manifest any aversion to taking the benzoate of sodium, and Dr. Haberkorn urges his hearers most strongly to make trial of a means so simple and yet, as he believes, so effectual.

THE TREATMENT OF WHOOPING-COUGH.

WHOOPING-COUGH is ordinarily regarded as a very troublesome disease, and one whose duration is seldom materially influenced by treatment. But if we can rely upon various reports which have recently appeared in the current literature, these views must be modified very considerably. We propose to review, briefly, a few of

these different methods which have been so highly commended by their originator, leaving it to our readers to try one or more of them as they see fit.

Dr. Kohlmetz writes in the *Deutsche Medicinal-Zeitung* of June 14, 1886, that an epidemic of whooping-cough in his neighborhood has given him an opportunity to try many of the new methods, but he has found only one to give good results. He uses a solution of quinine, four parts, dilute sulphuric acid, two parts, and distilled water, two hundred parts. He fills a glass syringe (size not stated) with this solution, and injects it forcibly against the posterior wall of the pharynx, the mouth being held open and the tongue, if necessary, depressed with a spatula. Some of the solution may be spattered into the larynx, but the greater part is either swallowed or spit out, and it is difficult to account for the excellent results which the author claims to have obtained. The application is made every two hours during the first three days, and every three hours after this time, and a cure, or a very marked improvement, is obtained in from three to eight days.

In the *Centralblatt für klinische Medicin*, of June 12, 1886, Dr. J. Bachem speaks very highly of insufflations of quinine into the nostrils. He employs muriate of quinine, three parts, rubbed up with gum acacia one part, and blows about three grains of the mixture into each nostril once or twice in the twenty-four hours. In a child who had been coughing for two weeks, having from ten to twelve attacks during the day, and six to eight at night, at the end of a few days the attacks were reduced to four or five in the twenty-four hours, and a cure was obtained in three weeks. Other cases are cited in which the results were almost equally favorable. An acorn-shaped tip is attached to the insufflator, in order to insure the delivery of the powder and to prevent any loss.

We find in *El Sentido Catolico en las Ciencias Médicas*, of June 12, 1886, a reference from some other journal of the results obtained by Dr. Michael by nasal insufflations of various powders. He employed quinine, pure or mixed with benzoic acid in the proportion of one part to three—tannic acid, boracic acid, salicylic acid, iodoform, cocaine, bicarbonate of soda, and marble-dust. Of these substances good results were obtained only with quinine, benzoic acid, tannic acid, and marble-dust. The success obtained with the last-named powder would seem to imply that the curative value of insufflation is largely dependent upon mechanical causes. In eight cases a cure was obtained in three days; in six cases, in eight days, and in six other cases a marked diminution in the severity of the symptoms was observed, though the duration of the disease was not apparently influenced.

At a recent meeting of the Société Medico-Pratique of Paris (*Concours Médical*, June 12, 1886) Dr. P. Guerder stated that he had also had excellent results from nasal insufflations. He had tried benzoic acid, as used by Dr. Michael, but had been more successful with a fine powder of equal parts of boracic acid and roasted coffee. In recent cases he was able to obtain a radical cure in from eight to fifteen days, and even after the disease had become firmly established the number of attacks was reduced, after from two to six days of treatment, from fifteen or twenty to four or five in the twenty-four hours, and a like improvement was noted in the other symptoms. The insufflations were practised morning and evening.

In the fasciculus for June, 1886, of the *Rivista Clinica e Terapeutica*, appears a communication from Dr. P. Sertoli, in which inhalations of iodoform and oil of turpentine are recommended very warmly for the cure of pertussis. The writer states that he found the number of the attacks to be lessened and their severity to be diminished soon after the inhalations were begun, and the duration of the disease was also shortened, a complete cure being obtained within less than twenty days.

We have previously referred to the results obtained by Dr. Moncorvo, of Brazil, with resorcine, and very recently also to the success claimed from the employment of narceine by M. Laborde and others. These are by no means all the methods which have been brought to the notice of the profession with the endorsement of their advocates, but they will suffice to show either that pertussis is far from being the intractable disease which it has hitherto been supposed to be, or else that it is very variable in its duration and course, sometimes subsiding spontaneously whatever form of treatment be adopted.

THE VESICULAR MURMUR.

DESPITE the fact that auscultation of the chest has been practised for over seventy years, there are many things about it which are still obscure. This is especially the case with regard to the causation of certain chest sounds. To ascertain the cause of the normal vesicular murmur would seem at first thought to be one of the simplest problems in the study. But the greater part of the discussion has occurred upon this very question. It was formerly taught that the murmur was due to the transit of the air through the bronchial tubes; to the unfolding of the lungs upon themselves in inspiration and the exit of the air from the lobules in expiration. Then arose authorities ascribing it to the transmission of the glottic sounds by the lung-tissue. Finally, this view was displaced by that of the so-called "fluid vein," which has held its own ever since. The latter may be explained by saying that whenever a jet of fluid, either liquid or gaseous, passes from a smaller to a larger orifice, a blowing sound is produced and is due to the fluid vein, that is, the form taken by the fluid in transit. This fact accounts for both cardiac and pulmonary murmurs.

In a paper recently read by Dr. Joseph Coats, before one of the London clinical societies, some interesting data are furnished concerning the subject under consideration. Dr. Coats had the privilege of observing a patient of Dr. Newman's. The latter had removed the larynx from the patient for some malignant disease, and the man was wearing a tracheal tube, curving forward and being of very nearly the same calibre as the trachea. From the convex side of this tube a smaller one extended up into the pharynx. The patient could thus breathe with the pharyngeal tube alone open, the tracheal tube alone open, or with the tracheal tube partially closed by a stopper, through which passed a much narrower tube, so that breathing was carried on through the latter, the pharyngeal tube being closed. It must be premised that the glottis presents the conditions for the fluid vein in both divisions of the respiratory act, viz., a

passage from a smaller to a larger tube. We consequently have a double blowing sound. Similar physical conditions obtain at the remote portions of the respiratory tract, where the ultimate bronchioles suddenly open into the somewhat wider air spaces. The vesicular murmur is due to the fluid vein existing in inspiration at this point. The sound is most easily propagated in the direction in which the vein is moving. We should not, therefore, *expect* to hear the expiratory glottic sound over the trachea, but its audibility there is probably due to the false cords and base of the epiglottis. These form a sort of lip, or rim, which causes a propagation of the sound backward, that is, down the trachea. A similar illustration is seen in those cases of aortic regurgitation where the diastolic murmur is heard over the aorta itself.

In Dr. Newman's case the glottic murmurs should have disappeared, in order to be consistent with the theory advanced by Bergeon and Chauveau as a result of their experiments performed in 1877. In a horse with hepatization at the base of one lung, where bronchial breathing was heard, the trachea was incised below the glottis, and the wound held widely open. The bronchial breathing immediately disappeared over the hepatized area. It will be seen that the patient, while breathing through the tracheal tube, presented physical conditions analogous to those in the animal in the above experiment. In both the glottis was eliminated, so far as any participation in breathing was concerned. Contrary to expectation, however, Dr. Coats found that there was a loud expiratory sound heard at some distance from the patient's body, and it was propagated down the trachea and the bronchi. In the suprasternal notch and over the trachea there was a loud, blowing expiratory murmur, and a feeble inspiratory murmur. At the root of the lung, behind, the difference in intensity between expiration and inspiration was much less marked. The former was nearly as loud as the latter. The former was blowing, the latter vesicular. The equalization in intensity was probably due to inspiration, being reinforced by the normal vesicular murmur. This would indicate, says Dr. Coats, that the vesicular murmur arose in the pulmonary parenchyma. This conclusion was confirmed by auscultation of areas where we normally get a good respiratory sound. In the supra-axillary region, for instance, inspiration was distinct and prolonged, but expiration was scarcely audible. The expiratory sound, although freely conducted to those portions of the chest-wall in contact with the root of the lung, was dampened by the pulmonary parenchyma. Hence it was inaudible at the pulmonary periphery.

When the tracheal tube was plugged, and the patient breathed through the pharyngeal tube alone, the sounds were nearly natural. Inspiration was loud, with expiration nearly equal in intensity and duration. Vesicular breathing was heard all over the chest, except at the root of the lung behind, where bronchial breathing was heard as is natural.

In the third case, where the tracheal tube was partially closed by a stopper carrying a smaller tube, the condition for a fluid vein was present at the internal orifice during inspiration, and at the external during expiration. Over the trachea inspiration was much louder than expiration. The sound from the inner orifice was better carried than that from the outer. Here the result was the converse of the first case, where the tracheal tube was wide open.

Dr. Coats' conclusions are as follows: First, sounds produced at the glottis and larynx are freely conducted by the dense tissues comprising the trachea and the bronchi. They are thus audible whenever these structures are so placed as to carry sounds to the surface of the chest. They may thus be conveyed in a direction contrary to the current of air. Second, the vesicular murmur is generated in the periphery of the lungs. In all the above experiments its character remained unchanged. Even while a loud expiratory sound was heard at the base of the lungs behind, it was not communicated over them generally. The presence at the anatomical site of the glottis of any arrangement causing a fluid vein seems to have no agency in the production of the vesicular murmur.

THE UTILITY OF LIME PHOSPHATES.

THE person who shows that a particular drug is of no value in therapeutics does a service to science, much more, perhaps, than by introducing a new remedy. M. E. Logeais, in the *Bulletin de Thérapeutique*, aims to prove that the phosphates, and particularly the lime salts, are useless drugs. This seems at first very much like flying in the face of a wise Providence, established pharmaceutical interests, and sound therapeutical principles. The use of the phosphates in rachitis, defective bone nutrition, and all forms of functional nerve troubles is very common, and has received the support of eminent authorities.

M. Logeais, however, quotes the experiments of Lehmann, Heiden, and Veiske, who claim to have demonstrated that the phosphates of lime added to the food are not absorbed, but are excreted in their entirety in the dejections. Dujardin-Beaumetz is quoted as saying that this salt has no action whatever, while Destage states, as a result of careful analyses of urine, that neither the phosphates of lime nor phosphoric acid is absorbed.

To this may be added the statement of Nothnagel and Rossbach: "Never, as far as we know, has a case of rickets been cured by the administration of lime." "Everywhere there is a lack of trustworthy and extensive observations," as to its utility.

All the forms of lime salts used in practice are, according to M. Logeais, precipitated and made insoluble as soon as they pass the stomach. They are, therefore, taken up, if at all, in the stomach alone, and the amount absorbed here is very small.

The practical conclusion that lime salts of all kinds are therapeutically useless, is one which deserves the attention of the many physicians who are constantly prescribing them in various conditions.

THE TREATMENT OF RHUS-POISONING.

A TIMELY article upon the treatment of rhus-poisoning appears in a recent issue of the *Journal of Cutaneous and Venereal Diseases*. The poisonous principle of *Rhus toxicodendron* (poison-oak) and of *Rhus venenata* (poison-ivy) resides in a volatile acid known as toxicodendric acid. The disease resulting is known technically as

dermatitis venenata. It is a curious fact that this poison is utterly inert with many persons, and, consequently, for the production of the dermatitis there must be some individual predisposition. So far as we can learn, dermatologists have not yet learned what makes up this curious and unfortunate predisposition. The plant is more active apparently in the spring and fall, and according to some authorities California is particularly rich in it. Even in standard works, there is a singular confusion as to the two plants which give rise to the toxicodendric acid. The poison-oak, or *Rhus toxicodendron*, is a rare plant, while the poison-ivy, or *Rhus venenata*, is comparatively common. Webster's Dictionary is incorrect on this point.

The disease which the poison produces is a dermatitis which runs a natural course of from one to six weeks, averaging perhaps two weeks. Its occasional very mild and brief course has led to the announcement of many specifics for rhus-poisoning. Specifics, however, do not in reality exist, and the most that can be done is to palliate the symptoms, and perhaps shorten the period of the inflammation.

The remedies most highly recommended by the editor of the *Journal* are the following solutions: ℞. Sodii hyposulphitis, ʒ j.; glycerinæ, ʒ ss.; aq., ad ʒ viij. M. Apply with compresses frequently renewed. When lotions cannot be continuously used the following powder is freely applied: ℞. Pulv. zinci oxid., ʒ ij.; bismuth subnitrat., ʒ j.; amyli, ʒ v. M. In later stages the following ointment may be given: ℞. Pulv. zinci oxid., amyli, āā ʒ ij.; vaseline, ʒ iv. M.

Another treatment highly recommended is the frequent application of black wash, followed at night by the following ointment: ℞. Acid. carbolic., gr. x–xx.; ung. aq. rosæ, ʒ j.; hydrarg. chlorid. mite, gr. x. M.

Both Dr. Hardaway, of St. Louis, and Dr. Van Harlingen, of Philadelphia, recommend highly a solution of sulphate of zinc, gr. ij. to O j. A mixture of fluid extract of grindelia robusta, ʒ ij. to ʒ j. of water is said to be very effective. Cloths are to be wetted with this, and then kept on the parts until they are nearly dry. Grindelia is generally believed to be the most efficient of the vegetable remedies, although Dr. Hyde, of Chicago, speaks enthusiastically of an ointment made by incorporating a decoction of the inner back of the American spice-bush (*Benzoin odoriferus*) with cold cream.

A writer in the *Philadelphia Medical Times* has recently recommended a saturated solution of oxalic acid painted on the part. No internal treatment seems to be indicated, unless it be a laxative.

It has been shown that if two persons are poisoned by the same plant, and treated in the same way, the inflammation in one case may subside rapidly, while in the other it may run a long course. This is a sufficient comment on all ordinary claims for specifics.

THE GEOGRAPHY OF THE TONGUE.

In a recent number of *The Medical World* is given a map of the tongue, which is to guide the practitioner in his explorations into the various parts of the economy of his patient. Say, for instance, that he wishes to know how it fares with the "right lung from the epiglottis to the ends of the bronchioles." Let him look into the northwest corner of the tongue (the root is to the north, and the right side is to the west), and there, occupying a large territory, he will find how is the lay of this land. South of this are "the alveoli and lung tissue." In the extreme southwest, and about as small as the State of Rhode Island in comparison with the other States, is the pleura, occupying a little triangle to the right of the tip. The left side of the tongue is platted out with the respiratory passages of the left side in a corresponding manner. The alimentary canal occupies the central belt, with the exception of the tip of the tongue, which is given to the kidneys. The regions mapped out follow each other from north to south in this order: "Alimentary region from pharynx to pylorus of stomach," a very large section; then comes the duodenum, next the liver, a regular little New Jersey joining a small Delaware of pancreas, after which comes respectively the small and large intestine.

The projector of this remarkable scheme, Dr. C. C. Benton, of Baltimore, states that "this map of the tongue, with its localized seats of relationship to the various organs of the body, places before the observer at a glance the derangements, if any, which affect any of these organs." He also states that he gives us but the outline of a more elaborate system which he has developed. He recommends this to the youthful members of the profession as a stimulating scheme, which will lead them to construct for themselves a complete and reliable method of diagnosis by means of the tongue.

News of the Week.

Trouble between a Board of Managers and the Medical Board.—The daily papers have given some attention to the troubles which have arisen in connection with the Riverside Hospital at Yonkers. It seems that Dr. E. M. Hermance, after serving for six years as Visiting Physician to the Hospital, resigned. In accordance with custom and precedent, the Medical Board sent his name to the Board of Managers for appointment as Consulting Physician. The Managers accepted the resignation, but refused to make the appointment requested, because one of the Managers had made charges against him. After much delay the Medical Board succeeded in getting the charges investigated, and Dr. Hermance was fully exonerated. Still he was denied the appointment; so the whole Medical Board, consisting of Drs. Reinfelder, Upham, Swift, Benedict, Browne, Moffat, Harrington, and Seabury, resigned. Dr. Hermance has brought a suit for $20,000 damages against one of the Board of Managers. Public opinion seems to be entirely on the side of the physicians, and deservedly so. The whole amount of the affair appears to be that some of the Managers desired to show their personal feeling against one of the doctors and their authority over all of them.

The Rag Question Settled.—Acting Secretary Fairchild has issued the following instructions to customs officers in regard to the importation of old rags: "All old rags imported into the United States in vessels which have passed local quarantine at the port of importation, will be admitted to entry in the same manner as

other imported commodities, that is to say, without requiring special permits from the health officers as to their landing. The fact that the vessel has passed quarantine will be considered as sufficient evidence that her entire cargo is free from infection."

THE CHOLERA IN JAPAN.—Since the first appearance of the cholera in Japan this year, and up to June 20th, there have been 10,276 cases of the disease, 7,803 of which have been fatal. The average death-rate per 100 has been 75.93. The total number of cholera cases which occurred throughout the country, from August 23d to November 30th, last year, was 11,927, of which 7,152 proved fatal, the death-rate being 59.96.—*San Francisco Chronicle.*

A LONDON SURGEON'S FAMILY INOCULATED FOR HYDROPHOBIA.—I have seen many frivolous cases at the Rue d'Ulm. Pasteur was right to treat them seriously, since rabies on the brain may, and often does, cause death. The whole family of an eminent London surgeon went through a course of inoculations because they had been licked on the hands and faces by a dog of which ugly suspicions were entertained. They comprised a grown-up young lady, two young men and their wives, and a couple of misses in their early teens. I could not help hoping, when I saw them, that the starchy-looking stuff which Dr. Grancher injected into their flesh was of the bread-pill nature.—*Fortnightly Review.*

FANCY-BRED RABIES.—An English writer, Crawford, is authority for the statement that an American named Stephens, to test his theory that hydrophobia is fancy-bred in man, never loses a chance of getting bitten by a mad dog. He has been wounded by canine teeth forty-seven times, and a German named Fischer, who is his disciple, nineteen times. As there is certainly such a disease as simulated rabies, I should advise some society for the diffusion of useful knowledge to scatter broadcast the small volume on "Le préjugé de la Rage," by Fangère Dubourg, and what was written on this subject by such lights of science as Bouley, Brechet, Tardieu, Majendie, Bondin, Vernois, Sausen, Renault, Donnat, Baron Portal, and Dupuy.

COMPULSORY INOCULATION FOR DOGS.—A serious danger underlies the run upon the laboratory of the Rue d'Ulm. It is compulsory inoculation for dogs. Such compulsion was mooted about a year ago by the opportunist section of the Paris press, and by M. Paul Bert in the lobby of the Chamber. He wanted to give the Van Amburg of the microbes the whilom imperial seat of Villeneuve l'Etang, near St. Cloud, for an experimenting place on dogs, and eventually for a central institute for obligatory canine inoculation. This scheme was actively put forward by M. Bert in a committee-room of the Chamber in the presence of a deputy, who repeated to me what was said, and who set his face against the proposal, which he foresaw speculators would take up. There are four millions of dogs in France. The inoculation fee on each, if rated at a franc, would be four millions of francs. My friend argued he could prove from Pasteur that all the evil potency of a wild virus is latent in a tame one. Measles tamed by frequency of occurrence in old countries will decimate red Indians and South Sea Islanders, to whose organizations they are new, and if taken from them by a European will act with intense virulence. The best preventive for rabies would be in the exclusion of dogs from cities, in carefully teaching them not to eat at waysides, and in keeping tainted meat out of their way. This view prevailed over M. Bert's, because the proprietors of villas near Villeneuve l'Etang got up a movement against the château being turned into a Pasteur Institute. It may be assumed that were rabies "laid" by inoculation, and dogs still kept in unhealthy conditions and allowed to feed on offal reeking with septic organisms, that nature would show resentment in some new disease as bad or worse than the known one.—*Fortnightly Review.*

THE SUPRA-PUBIC OPERATION FOR STONE.—Sir Henry Thompson says that he does not do lithotrity when the stone weighs over two ounces. In such cases he invariably does the supra-pubic lithotomy. He has given up almost entirely the perineal operation. In the supra-pubic operation he divides the skin, supra-superficial fascia, etc., with a knife, and all the remaining tissues, including the walls of the bladder, with his finger-nails, thus avoiding hemorrhage. He does not close the opening in the bladder after removing the stone, but introduces a drainage-tube for forty-eight hours, keeping the patient on his side. Sir Henry's chief reasons for preferring the supra-pubic operation to the perineal are the almost entire absence of hemorrhage and the greater facility of removing the stone. The supra-pubic is coming pretty generally into favor here. Mr. Buckstone Brown tells me that he quite frequently does lithotrity in children.—Cor. *Amer. Practitioner.*

OVARIOTOMY AND SPECIALISTS.—Mr. Knowsley Thornton is still a warm advocate of the spray. He tells me that, now that ovariotomy is becoming so very common as to be performed by all surgeons, the specialists do not get near so many cases, and so they are paying more attention to hysterectomy and oöphorectomy.—Cor. *Amer. Practitioner.*

PONDEROUS BREASTS.—A correspondent of *The Lancet* calls up the following delicate point in casuistry: "I have a patient who suffers from great pain round the waist, and in the breasts almost constantly, due to the size of her breasts, which are unusually large. She complains that they make her life a burden to her, and constantly entreats me to amputate them. Would this be justifiable? Their weight produces a constant dragging pain from the clavicle downward, and from the back and sides forward, relieved when the weight of the breast is supported. Is there any known means of causing the breasts to contract by the application of any drug? If their weight and size could be greatly reduced it would be a boon. If any of your readers can from experience of a similar case suggest a trustworthy line of treatment I shall be most grateful."

ORGANIZATION OF INDIA-RUBBER.—M. Professor Van Lair, of Liège, announces to the Académie de Médecine the curious fact that a tube of caoutchouc placed between the two ends of a cut nerve becomes vascularized, the nerve-fibres prolong themselves into it, and finally the two ends of the nerve units, the caoutchouc disappearing.

Obituary.

ALFRED S. PURDY, A.M., M.D.,

NEW YORK.

ANOTHER of New York's oldest and most esteemed physicians has gone, in the person of Dr. Alfred S. Purdy, who died suddenly of pneumonia on the 23d inst. Dr. Purdy had been in his ordinary health up to a short time before his illness.

He was born in 1808, in this city, of which he has been a constant resident, and in which he practised his profession for fifty-five years. He fitted for Columbia College, but did not enter upon a collegiate course, determining to study surgery. He entered the office of Dr. Alexander H. Stevens, and afterward studied at the College of Physicians and Surgeons, from which he graduated in 1834. He then opened an office, and moved up town, as the city spread its limits, to his home on Madison Avenue.

In the early days of his professional life Dr. Purdy was Assistant Surgeon at Bellevue Hospital, and was also connected with the New York Dispensary. Dr. Purdy's life has been one of steady attention to his profession. He was a general practitioner, though in the past few years he has paid much attention to the study of puerperal insanity. He received the degree of A.M. from Wesleyan University.

Dr. Purdy was one of the founders of St. Paul's Methodist Episcopal Church of New York, of which he was a trustee at the time of his death. He was also a member of the Medical Society of the County of New York, of the Academy of Medicine, and of the Pathological Society.

Reviews and Notices.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D., Professor of Pathology and Practical Medicine, College Physicians and Surgeons. Vol. II. Part 2. New York: William Wood & Co., 56 & 58 Lafayette Place. June, 1886.

THIS part contains thirty-five pages of text, upon which are described the lesions of chronic phthisis and a special lesion of lobar pneumonia. These are illustrated with twenty-seven plates.

The author is one of the most concise and comprehensive writers in the medical profession. His language is simple, his style is laconic, and at no time does he become ornate; but there is a directness of expression which points to positive opinions based upon personal investigation.

It has already been said of former fasciculi of this work, and we are ready to repeat the statement, that "the fidelity of these illustrations is beyond praise, while their execution in the different methods makes them specimens of high art." Still further, in viewing the admirable presentation of microscopical appearances, we are privileged to sit, as it were, beside the master, and almost view the specimens with his eye.

In the light of the most recent advancements in pulmonary pathology, it is interesting to notice that Dr. Delafield makes the unqualified statement that "the one essential feature of chronic phthisis is the presence of tubercular inflammation; without this there is no phthisis. Such a tubercular inflammation is not only an essential, but also a primary, part of chronic phthisis; it exists from the very commencement of the disease." "The tubercle bacilli are regularly found associated with the lesions of chronic phthisis."

The pages on lobar pneumonia constitute an appendix in which the author describes pneumonia occurring in adults, and running an *acute* course, and yet after death the air-spaces were found to contain organized new connective tissue. The special interest in the lesions exists in the fact that the author has observed it in *acute* cases. In this respect the observation is new.

All students in pathology will be highly interested in the continuation of Dr. Delafield's great work, which exhibits the care and elegance uniformly displayed by his publishers.

DISEASES OF THE SPINAL CORD. By BYRON BRAMWELL, M.D., F.R.C.P. Edinburgh. Fifty-three Colored Plates and one hundred and two fine Wood Engravings. Second Edition. Pp. 298. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

THE publishers have done no small service in making Bramwell's superb work accessible to the general practitioner. Its merits are already widely known. It has been translated into German, French, and Russian, and has received the highest encomiums from critics on every side. The book is thoroughly scientific in method, and represents the most recent knowledge in spinal cord pathology. The subject is handled also with great clearness and conciseness, and is enriched with a most lavish display of colored illustrations in normal and pathological histology.

The present edition contains some changes in arrangement—a chapter on concussion of the spinal cord (which is not very good), and an appendix on pseudo-hypertrophic paralysis.

The criticisms to be made on Bramwell's book are that he has presented the pathology in a more systematic and positive way than facts will justify.

There is not very much said with regard to the art of treating spinal diseases.

The publishers have very perfectly reproduced the cuts and colored illustrations of the original work.

INSANITY AND ITS TREATMENT. Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. FIELDING BLANDFORD, M.D. Oxon. Third Edition. Together with Types of Insanity, an Illustrated Guide in the Phasical Diagnosis of Mental Disease. By ALLAN MCLANE HAMILTON, M.D. Pp. 379. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

DR. BLANDFORD'S book consists of twenty lectures, origi nally delivered at St. George's Hospital some ten years ago. These were well received, and have been regarded as furnishing a standard and trustworthy treatise. The book before us is the third edition, which the author has revised in the light of recent contributions to mental science.

We regard Dr. Blandford's treatise as one that will prove eminently helpful to the general practitioner. It is not long, and it does not go extensively into minutiæ. The specialist will read it with interest to learn the author's views, but it will not instruct him greatly.

Dr. Hamilton's "Types" have already been commented upon and commended in these columns.

VORLESUNGEN ÜBER PHARMACOLOGIE FÜR AERZTE UND STUDIRENDE. Von DR. C. BINZ. III. Abtheilung (Schluss). Verlag von AUGUST HIRSCHWALD. Berlin, 1886. Lectures on Pharmacology for Physicians and Students. Third (and final) volume.

THE present, concluding, volume of this valuable series begins with the forty-second lecture, and covers the subjects of bismuth, silver, mercury, the antiseptics, salicylic acid, the antipyretics, fermentative acids, free acids, evacuant drugs, emollients, and counter-irritants. One cannot praise too highly these lectures of Dr. Binz. Though, strictly speaking, pharmacological, they, in reality, give much in practical therapeutics, and, as a whole, will furnish the physician a solid basis for using drugs intelligently in practice.

URINARY AND RENAL DISEASES. Illustrated by numerous Cases and Engravings. By WILLIAM ROBERTS, M.D., F.R.S., F.R.C.P., Professor of Medicine at the Victoria University; assisted by ROBERT MAGUIRE, M.D., M.R.C.P., Physician to Out-patients, St. Mary's Hospital, London. Fourth edition. Philadelphia: Lea Brothers & Co. 1885.

A PRACTICAL TREATISE ON DISEASES OF THE KIDNEYS AND URINARY DERANGEMENTS. By CHARLES H. RALFE, M.A., M.D., F.R.C.P., etc. Philadelphia: P. Blakiston, Son & Co. 1885.

THE PATHOLOGY AND TREATMENT OF STRICTURE OF THE URETHRA AND URINARY FISTULÆ. By SIR HENRY THOMPSON, F.R.C.S., M.B. Lond., etc. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1885.

HARN-ANALYSE FÜR PRAKTISCHE AERZTE. Von DR. S. LAACHE. Leipzig: F. C. W. Vogel. 1885.

NEW works on diseases of the genito-urinary apparatus, or at least new editions of old ones, are cropping up with such numerical vigor as to suggest one of two possibilities—either the afflictions of which they treat are on the increase, or else there is a growing demand, on the part of the profession, to know all that is knowable up to the most recent results of elaborate research pertaining to a topic that is as complicated as it is interesting. We are inclined to believe that the latter possibility represents the true state of affairs. Probably the view is gaining ground that many hitherto obscure derangements in some way depend upon morbid conditions of the genito-urinary organs. Furthermore, there exists already a widespread belief, and a very just one it is, too, that more may be learned from a systematic examination of the urine than has yet become the undisputed and common intellectual property of the medical profession.

The list of works given above by no means represents all that has found its way into the print of book-form on the subject of these disorders, even within the period of a twelvemonth. Nevertheless, it includes some of the most important publications, and we regret that it will be impossible to do more than quite briefly examine the four volumes before us. The design of Dr. Roberts' volume, of six hundred and twenty-eight pages, is to give an account of the organic diseases of the kidney, and of those diseases and disorders of which the chief characteristic is some alteration of the urine. The author has divided his work into three parts. The first is devoted to a consideration of the physical and chemical properties of the urine in health and disease, and includes two excellent chapters on urinary deposits. Part II. treats of those diseases which are chiefly characterized by some alteration in the composition of the urine, *i.e.*, diabetes, gravel, chyluria, and so forth. The organic diseases of the kidneys naturally come next, and receive in the third part that amount of painstaking attention to which their gravity and frequency so justly entitles them. Malpositions of the kidneys, cancer, tubercle, parasites, aud other rare affections are treated analytically, but yet with sufficient fulness to include all the information which the practitioner is likely to desire concerning them. On the whole, it must be said that the value of this treatise as a guide-book to the physician in daily practice can hardly be overstated. That it is fully up to the level of our present knowledge is a fact reflecting great credit upon Dr. Roberts, who has a wide reputation as a busy practitioner.

Dr. Ralfe's treatise has for its object the presentation of a "clear, concise, and systematic account of urinary pathology and therapetics, based upon the latest ascertained facts, and supported by the best authorities." The work is a readable one, but, as compared with Dr. Roberts' volume, it is too evidently a careful compilation of the opinions of various authorities, rather than the result of wide personal experience, to make one wish to consult it by preference. Nevertheless the information contained in its pages is trustworthy, and there is no reason to doubt that the book will find favor with those who like a somewhat condensed style, and who prefer facts to theories.

Sir Henry Thompson's well-known monograph appears in its fourth edition, a somewhat reduced modification of the previous one. Illustrative cases are entirely removed from the present issue, since the author holds them no longer necessary to substantiate his personal views. The eminent writer's methods of treatment are familiar to the reading public, and we have merely to add that, barring some slight details, they are those universally practised both in England and our own country. Possibly, however, the American surgeon uses the conical steel sound rather more frequently than appears to be entirely prudent and advantageous. At least, Sir Henry favors the soft bougie, in many cases where we would not hesitate to employ the harder instrument.

Concerning Dr. Laache's work on urinary analysis there is nothing to say, except that it is a trustworthy guide to this important department of medical investigation. The English reader, being liberally supplied with equally good works, written in his own language, will scarcely care to provide himself with a work that does not differ materially from Tyson and similar practical manuals.

THE MEDICAL REGISTER FOR 1886. WILLIAM T. WHITE, M.D., editor. New York: Putnams.

THIS, the twenty-fourth volume of this publication, is a reproduction of its predecessors as to general appearance and scope of its contents. It contains the names of nearly seven thousand physicians, as follows: New York, 2,884; New Jersey, 824; Connecticut, 527. An increase over last year of 190.

In the New York City list 1,926 are registered; an increase of 24. Brooklyn has on its list 639; an increase of 41. Of the total number 154 are serving in the various hospitals and asylums.

The statistics in regard to the various societies and institutions are commendably accurate.

A PECULIAR ACCIDENT FOLLOWING AN OPERATION FOR HYDROCELE.—MM. Boursier and Loumeau relate the following case in the *Journal de Médecine de Bordeaux*, of June 20, 1886. A strong, healthy man, aged forty-four, of good antecedents and presenting no history, hereditary or personal, of nervous troubles, entered hospital on account of a hydrocele. There was nothing peculiar to note about the hydrocele, which occupied the right side of the scrotum, and upon which it was decided to operate by evacuation of the fluid and injection of dilute tincture of iodine. Immediately upon the injection of the first few drops the patient complained of pain in the cord and groin, and of cramps in the right forearm. The hand was seen to be slightly flexed toward the ulnar side, the little- and ring-fingers were completely flexed, while the middle-finger and index had their two terminal phalanges extended on the first, this one being flexed on the metacarpus; the thumb was flexed and drawn toward the other fingers. In a short time the same convulsive movement took place in the left hand. There were neither convulsions nor syncope, but the painful contractions persisted for some minutes and then gave way, the index and middle-finger becoming completely flexed, the hand also being flexed on the forearm. On a question being addressed to the patient it was found that he could not articulate, the muscles supplied by the hypoglossal being also contracted. The latter soon disappeared, but the contractions in the forearms and hands persisted for nearly an hour. The authors regarded the spasms as of reflex origin, but were unable to explain their localization to the muscles supplied by the median, ulnar, and hypoglossal nerves.

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held at Long Branch, July 21, 22, and 23, 1886.

WEDNESDAY, JULY 21ST—FIRST DAY—MORNING SESSION.

THE Association met at the Howland House, and was called to order, at 11 A.M., by the President, DR. BURT G. WILDER, of Ithaca, N. Y.

ADDRESS OF THE RETIRING PRESIDENT.

In view of the fact that he delivered a somewhat extended address upon a general subject last year, Professor Wilder confined his remarks to the brief discussion of what he believed to be a new fact, namely

THE ACCURATE COLLOCATION OF A SUTURE AND FISSURE IN THE HUMAN FŒTUS.

In three alcoholic fœtuses in the museum of Cornell University, estimated to be from three to seven months advanced, the lambdoidal suture directly overlies a short but deep fissure, which has seldom been noticed, has been hitherto misinterpreted, and may be called the *lambdoidal fissure*. A photograph and drawing of one case were submitted. The fissure is very distinct and deep, but has no ental correlative in the specimen examined. Bischoff and Huxley have regarded the fissure itself as temporary in man, though persistent in apes. Professor Wilder believed the fissure itself to persist in man also, but to lose its relation with the suture in the last two months of fœtal life. He mentioned the probability that the coronal suture is similarly related with the precentral fissure, and closed his remarks with an enumeration of several questions that arise in connection with the subject, and with suggestions as to making use of fœtal brains by careful exposure, preservation, photographing, etc.

DR. WILDER then introduced the President-elect, DR. CHARLES K. MILLS, of Philadelphia.

THE TREASURER'S REPORT

showed a balance in the treasury of $114.55.

ELECTION OF NEW MEMBERS.

The Council recommended the following candidates, who were elected by a ballot cast by the Secretary, DR. R. W. AMIDON, of New York: Drs. F. X. Dercum and James H. Lloyd, of Philadelphia; B. Sachs, J. Rudisch, and E. D. Fisher, of New York.

THE PRESIDENT'S INAUGURAL ADDRESS.

DR. MILLS then delivered his inaugural address, in which he made brief reference to the scientific work done by the members of the Association, and published in systems of medicine, encyclopædias, and medical journals. He made special reference to the organization of the Congress of American Physicians and Surgeons, and said that he was personally in favor of the Association becoming an integral part of the Congress, and that he hoped that the Association would take the steps necessary to effect such a consolidation.

Dr. Mills thought that some changes in the plan of the Congress would be advantageous; for example, that the Congress should meet every two years instead of annually; that some arrangement should be made by which the national organizations composing the Congress should in rotation receive the office of President; and that general sessions should be held mornings, and each society have its own sessions in the afternoon.

After these preliminary remarks the President proceeded to the subject proper of his paper, which consisted in a demonstration of the anatomical peculiarities of several brains, with notes of observations on others. The first was the brain of a monomaniac; the second, that of Taylor, a criminal, the subject of delusional insanity; two others, the brains of murderers, and lastly the brain of a Chinaman and that of a feeble-minded person. His purpose was to call attention to aberrations in development, and in general terms they were such as allied them to the simian brain. The peculiarities related to bulk, simplicity of convolutions and fissures, atypical asymmetry, confluence of fissures, etc., and they indicated a low order of human beings. In only the specimen presented had he ever observed complete confluence of the fissures of Sylvius and Rolando.

The paper was discussed by Drs. B. G. Wilder, of Ithaca; L. C. Gray, of Brooklyn; F. X. Dercum, of Philadelphia; Joseph Jastrow, of Johns Hopkins (by invitation); W. R. Birdsall and B. Sachs, of New York, and the discussion was closed by Dr. Mills.

The Association then adjourned to meet at 3 P. M.

AFTERNOON SESSION.

The Association was called to order by THE PRESIDENT.

DR. L. C. GRAY, of Brooklyn, read a paper in which he gave the history of

A CASE OF LESION OF BOTH TEMPORAL LOBES, PRODUCING GENERAL LOSS OF MEMORY OF EVENTS, WITHOUT WORD DEAFNESS AND WITHOUT DEAFNESS.

The patient was a man forty-three years of age, single, and an American, who gave an indirect history of syphilis. The mental faculties, other than loss of memory, were intact. He had convulsions, remained comatose thirty-six hours, and then died. The autopsy showed a normal skull and normal dura mater, lepto-meningitis of both the right and the left temporal convolutions, extending around the fissure of Sylvius, involving the gyrus marginalis and the bases of the ascending frontal and parietal convolutions. Besides, there were minute hemorrhages and chronic endarteritis.

The case was in accord with one reported in 1884, by C. Westphal, the details of which Dr. Gray gave.

The paper was discussed by Dr. Philip Zenner, of Cincinnati.

DR. V. P. GIBNEY, of New York, then read the history of

A CASE OF PSEUDO-HYPERTROPHIC PARALYSIS,

from which microscopical sections had been prepared by DR. R. W. AMIDON, of New York, who demonstrated the changes that had taken place. This consisted in a marked paucity of motor-cells in the anterior horns, particularly in the lumbar and dorsal regions, and those which remained had only few processes and took the staining agents poorly.

Dr. Gibney raised the question as to whether there was any cord lesion distinctive of this affection, or was it simply an interstitial myelitis; also, whether the later stages of this disease were distinguishable by clinical features from each other or from progressive muscular atrophy.

The communication gave rise to discussion participated in by Drs. G. W. Jacoby and B. Sachs, of New York; Philip Zenner, of Cincinnati; L. C. Gray, of Brooklyn; F. X. Dercum, the President, and J. H. Lloyd, of Philadelphia; R. W. Amidon and G. M. Hammond, of New York; the general tenor of which was to doubt the existence of a spinal lesion, and that the two diseases were closely allied, if not identical.

DR. SARAH J. MCNUTT, of New York, then read a paper in which she reported

THE CASE OF AN INFANT WITH MULTIPLE TUMORS OF THE CEREBRUM, PROBABLY OF SPECIFIC ORIGIN.

The autopsy was made by Dr. T. E. Satterthwaite, and the microscopical examination was made by Dr. W. H. Porter and Dr. W. A. Shufeld, of New York.

Dr. G. Belton Massey, of Philadelphia, then read a paper

ON THE CAUSE OF ELECTROTONUS AND OF THE NORMAL FORMULA OF POLAR REACTIONS.

After referring to the greater action of the cathode in both electrotonus and electro-contraction, the reader drew preliminary attention to the laws of current distribution within large conductors, and exhibited drawings of the potential planes and lines of flow modelled from the results of actual measurements within tubs of salt-water by Professor W. G. Adams, of England. These measurements showed that the potential of either sign gradually lessened from the electrode toward the middle of the body, where it was zero. A nerve placed anywhere between an electrode and the middle of the body would, therefore, be bathed in the polarity of that electrode, with no other polarity in the immediate neighborhood, as held by Erb, De Watteville, and others. This theory of Erb—first advanced by Helmholtz—of a *peripolar* region of opposite polarity in the immediate neighborhood of each pole, is consequently opposed to the proven laws of physics.

In explaining the admitted fact of the greater action of the cathode some other theory must be adopted. The reader thought that the proper explanation lay in the correction of a misconception in physics: the direction of the current is probably the reverse of that now held, being from the cathode to the anode. Such an assumption would require a radical change of ideas as to which was the real positive pole, or pole of raised level, but would not interfere with the laws of electricity in any way. Its adoption would make both electrotonus and electro-contractility rational and comprehensible, for catelectrotonus would then be due to a raised potential in a nerve, and anelectrotonus to a depressed potential. Cathodic closure produces greatest contraction because it is the application of electric energy to the nerve, and anodic opening comes next because it is a backward rush of normal potential. Many facts in physics make it probable that this direction of currents is the true one, while it effectually disposes of the contradictory terms involved in still calling the pole most positive in its action on the body the "negative pole."

The paper gave rise to discussion, participated in by several members, after which the Association adjourned to meet at 10.30 A.M., Thursday.

THURSDAY, JULY 22D—SECOND DAY—MORNING SESSION.

The Association was called to order by The President, and the first paper was

THE REPORT OF THE COMMITTEE ON DOSAGE OF ELECTRICITY

appointed at the last annual meeting, and consisting of Drs. George W. Jacoby, W. R. Birdsall, and R. W. Amidon, of New York.

The Committee reported that special rules applicable to all cases for the use of the current strength, or for the length of time to be devoted to each application of electricity, did not exist, and, in the nature of things, could not be formulated; that all conclusions arrived at by any special investigator or series of investigators—no matter with what mathematical accuracy these conclusions be expressed—could only be arrived at empirically, and were dependent upon private experience and personal views. Therapeutic experience is too weak a foundation upon which to build an edifice of such magnitude as electrical dosage.

The Committee, however, recommended the employment of all possible accuracy, in concordance with present scientific knowledge, in the application of electricity. It advocated the use of the measures adopted by the International Electrical Congress of 1881; also the use of an accurate galvanometer divided according to the system. Furthermore, the Committee recommended the adopton of electrodes of certain diameters, with their square distinctly marked upon them in square centimetres (Erb's normal electrodes).

It was also recommended that a system of expressing the current used, in accordance with these facts, be adopted, and that a fraction be always used of which the numerator represented the number of milliampères employed, and the denominator the number of square centimetres contained in the electrodes.

The report was discussed by Drs. L. C. Gray, of Brooklyn; J. H. Lloyd, of Philadelphia; L. Weber, of New York; G. Belton Massey, of Philadelphia, and the discussion was closed by Dr. Jacoby.

Dr. R. W. Amidon, of New York, Secretary, presented a photograph of a

MICROCEPHALIC GIRL,

fifteen years of age, who had three sisters in the same condition, and which had been received from Professor A. Forel, of Zurich, Associate Member; the father and mother were normal.

The next paper was by Dr. Burt G. Wilder, of Ithaca, and entitled

NOTES ON THE BRAIN.

FIRST—ADDITIONAL CASE OF INDEPENDENCE OF THE PAROCCIPITAL FISSURE.

In his recent paper on the paroccipital fissure Professor Wilder stated that, among forty-three reliable specimens and figures accessible to him, the paroccipital is continuous with the parietal in twenty-one, and independent in twenty-two. The brain of a negro child at birth, lately prepared by him, had the two fissures wholly independent on the right, and barely united by a shallow junction on the left.

SECOND—AN ENTAL CORRELATIVE OF THE OCCIPITAL FISSURE IN THE EARLY FŒTUS.

In a fœtus, estimated to be about six or seven months old, as shown in an accompanying photograph and figure, opposite the occipital fissure there was a distinct ental ridge, so that the entire thickness of the wall was there folded. A similar ridge is figured by Tiedemann, but not named or described. Without further observations it cannot be determined whether it disappears in the adult, or persists as the more or less distinct elevation known as the *bulbus cornu posterioris* or *eminentia splenialis*. Even if transitory, it adds another to the list of "total fissures," including the calcarine, hippocampal, collateral, and sylvian.

THIRD—THE FŒTAL EXTENSION OF THE PROPLEXUS TO THE END OF THE POSTCORNU.

This is the case in a fœtus estimated to be seven months old. The postcornual extension is apparently in process of atrophy. There were indications of a like extension into the precornu. These extensions might be expected in view of the great volume of the plexus at a still earlier stage.

FOURTH—POINTS ILLUSTRATED BY THE TRANSECTION OF A FŒTAL BRAIN.

Six points of morphological interest were noted, most of them indicating that the thalami increase in width as development proceeds, so that in the adult human brain they form, or seem to form, part of the floor of the procœles or lateral ventricles, which is not the case in other mammals, excepting, perhaps, the primates.

The communication was discussed by Drs. Gray, Mills, and Wilder.

The President announced the reception of

THE BRAIN OF A NEW-BORN NEGRO CHILD

from Dr. Formad, of Philadelphia.

Dr. L. Weber, of New York, then read a paper

ON THE PSYCHO-NEUROTIC AFFECTIONS WHICH ACCOMPANY AND OFTEN MASK PHTHISICAL DISEASE.

It was a daily observation that there was a special condition of the mind associated with pulmonary tuberculosis. Frequently it consisted in a peculiar, cheerful, hopeful condition, which seemed to be strangely out of harmony with the unmistakable signs of the advancing fatal disease by which it was accompanied.

But there was also a state of marked mental depression which had been noticed in intimate association with the disease.

The peculiar hopefulness was most frequently seen in the acute form of phthisis, and it was often so irrational and persistent as to amount to an insane delusion. In the last stage of such cases the emotional exaltation was often extreme, and actual delirium not unfrequent. The opposite mental condition was met with in chronic phthisis, more especially in that form which had been called latent. All through the course of the disease there was depression and distrustfulness, although the symptoms were neither so depressing nor so obvious as in the acute forms. The mental symptoms sometimes preceded the physical signs, and were such as languor and depression mingled with waywardness, rather characteristic of the initial stage, and usually accompanied by general functional debility. In many cases the physical signs of pulmonary phthisis were apt to be overlooked; in others they escaped observation for years, although repeated and careful examination may have been made by careful observers.

Again, when the mind was much affected the symptomatic cough and expectoration and dyspnœa were often absent; and that was the case sometimes when physical exploration revealed the existence of quite large excavations present in advanced phthisis. Occasionally fits of considerable excitability and excitement might vary the picture. There was a general disinclination to enter into any kind of amusement or continuous work, and even if it was overcome, there was no interest manifested in the employment. This condition might be called a mixture of subacute mania and dementia. If there was any single tendency that characterized the mental state in these cases it was *to be suspicious*.

Dr. Weber related illustrative cases occurring in women. The treatment should be very largely hygienic and dietetic.

The paper was discussed by Drs. L. C. Gray, of Brooklyn, R. L. Parsons, of Sing Sing, and J. Van Bibber, of Baltimore, who mentioned cases illustrating the phenomena described by the author of the paper, and the discussion was closed by Dr. Weber.

Dr. Philip Zenner, of Cincinnati, O., presented a patient who was the subject of

AUCTIONEER'S CRAMP.

It belonged to the group of cases which were termed professional neuroses, of which "writer's cramp" was the most common and the best type. The patient had worked in his occupation to an extreme degree, and all at once he discovered that something was the matter with his mouth as he cried a sale. The muscle chiefly affected was the orbicularis oris, and particularly the left part. The man was forty-five years of age, with good family history, and had always been in excellent health. There was no evidence of further disease of the nervous system. As he said, "Five, five, five," etc., as in crying a sale, for example, there was considerable muscular spasm about the mouth, accompanied by a sense of exhaustion.

Dr. Zenner said that the diagnosis of professional neurosis was based upon the fact of excessive use of affected muscles in the patient's occupation, and the fact of the spasm being excited by the direct exercise of those muscles, which were the basis of all professional neuroses. It was possible that there was a neuritis present, as had been found in various cases of writer's cramp, but the evidence of its presence in this case was not strong.

The case gave rise to considerable discussion, participated in by the President; Dr. Gray, of Brooklyn; Dr. Weber, of New York, and the discussion was closed by Dr. Zenner. The question of diagnosis was the chief point at issue.

The Secretary read a communication received from

PROFESSOR GUDDEN,

acknowledging his high appreciation of the honor conferred upon him by being elected to Corresponding Membership at the last annual meeting. [It will be remembered that Professor Gudden lost his life at the time the mad King Ludwig committed suicide.]

The Association then adjourned, to meet at 3 P.M.

AFTERNOON SESSION.

Dr. Burt G. Wilder, of Ithaca, exhibited

A LIVING FROG WHICH WAS DECEREBRIZED MORE THAN SEVEN MONTHS AGO.

The frog was in excellent health, could change his position, balance himself, execute the retrograde movement, wink with one eye, would not open his mouth voluntarily, but did not know any better than to attempt to do two things at the same time, the reverse of each other; for example, try to swallow one end of the minnow, and with his foot endeavor to scratch the other end of the fish out of his mouth.

Remarks were made by Drs. Gray, of Brooklyn; Sachs, of New York; Jastrow, of Baltimore, and Zenner, of Cincinnati.

Dr. C. L. Dana, of New York, then read a paper on

PSEUDO-TABES FROM ARSENICAL POISONING,

in which he reported two original cases. The object of his paper was to report these somewhat unique cases, presenting the symptoms of tabes dorsalis; next to show that arsenical paralysis, like those from diphtheritic poison and alcohol, presented two types: 1, What might be called the mixed or ordinary form; 2, the ataxic form; and finally, to show that the ordinary teachings that arsenical paralysis was due to a diffuse myelitis was incorrect, and that these paralyses were really the result of multiple neuritis. His conclusions were:

First.—That a disease resembling locomotor ataxia may be caused by arsenic given indiscriminately, absorbed from wall-papers, or taken in single large doses.

Second.—That arsenical paralysis of this type and arsenical paralysis of other types are not due to a diffuse myelitis, as has been taught, but to multiple neuritis.

Third.—The arsenical paralysis, like those from diphtheria, alcohol, and probably other infectious diseases and poisons, are of two types: (1) The ordinary mixed motor and sensory paralysis, the motor troubles and atrophy being marked; and (2) the pseudo-tabetic form, in which there is no pronounced motor paralysis, but marked sensory troubles, and especially ataxia.

The paper was discussed by the President, and Dr. Sinkler, of Philadelphia; Dr. Jacoby, of New York, and Dr. Sachs, of New York, and the discussion was closed by Dr. Dana.

The general result of the discussion seemed to be that various parts of the body might be involved by these poisons, and that it could not be safely accepted that the lesions produced were exclusively either a myelitis or a neuritis, but with the evidence rather in favor of neuritis as against myelitis.

Dr. Wharton Sinkler, of Philadelphia, then read a paper on

THE TREATMENT OF PAINLESS FACIAL SPASM.

The treatment of tic non-douloureux was unsatisfactory, and, according to Erb, one of the most thankless

problems of medical practice. All authorities agreed that therapeutic measures were of but little use in the treatment of this annoying affection. Various drugs had been spoken of favorably in its treatment, but he had not been able to find reports showing that any cases had been cured for a length of time by any single remedy. Surgical measures had, therefore, become necessary to afford relief. Dr. Sinkler then mentioned the various operations which had been resorted to, such as section and resection of nerves, etc. (In the case which he reported resection of the infraorbital nerve did not produce any permanent relief.)

The possibility of stretching the facial nerve naturally suggested itself, after other nerves had been stretched with good results, and the operation was first performed by Baum for the relief of facial spasm in 1878. The patient was cured for eight or nine months, and then had a slight relapse, but after two years she was comparatively free from the disorder. There have been since Baum's operation twenty others, the last being the case which Dr. Sinkler reported, and in which the patient, a woman forty-nine years of age, came under observation first in the summer of 1883. She received a great variety of treatment without much relief, until the facial nerve was stretched by his colleague, Dr. W. W. Keen, in April, 1886.

Dr. Sinkler then quoted from Dr. Keen's table, which showed that there had been 21 cases of tic convulsif in which the facial nerve has been stretched with the following results: complete relief in 5. In Dr. Sinkler's case there had been no return except the trifling twitching of the lower fibres of the orbicularis. In 14 cases complete relief, in 3 lasted only one week, and after that time in 1 of them the improvement lasted for two years, and in the other there was no improvement.

In 5 cases complete relief lasted from three weeks to four months; of these 4 continued improved, and 1 was finally not any better than before the operation.

In 6 cases there was absolute relief from four months to one year; of these, improvement continued in 3, and there was no improvement in 3.

Of the whole number (21) there were but 6 in which it was reported that there were no relapses and the condition as bad as before the operation. There was but 1 case in which there was not complete relief for a longer or shorter period. It was true that none of these cases were under observation long enough to make a thorough test of the value of the operation, but no one means had given relief in so large a proportion of cases.

Dr. Sinkler was inclined to believe that in his case the disease was of peripheral origin, from the fact that she had two attacks of chorea in early life, and also the influence which the menstrual periods exerted upon the facial spasm.

The paper was discussed by the President, Dr. Massey, of Philadelphia, and Dr. Dana, of New York, who regarded statistics as extremely fallacious.

Dr. E. D. Fisher, of New York, then read his inaugural thesis, which was entitled

REMARKS ON EPILEPSY.

The object of the paper was to show the central character of epilepsy, and to place it among organic diseases, rather than functional disorders—a chronic disease of the cortex, with progressive decline toward insanity, belonging to the class of cases called general paresis.

Dr. B. Sachs, of New York, then read his inaugural thesis, entitled

INTRACEREBRAL HEMORRHAGE IN THE YOUNG.

After referring to the increased attention neurologists were paying to the cerebral accidents of children, the writer recorded his conviction that intracerebral hemorrhage was more frequent than it was generally supposed to be, and that many cases of this sort were commonly classified under the head of meningeal hemorrhage.

Dr. Sachs then reported two cases of intracerebral hemorrhage, one in a boy two and a half years old, and the other in a young man of nineteen years. The history of the first case was given in full, in order to place the diagnosis on a firm basis. The child had typical right hemiplegia with aphasia, without coma or convulsions, at the time of onset. The onset was slow, aphasia setting in first, paralysis of the arm and leg some hours later. The recovery was typical of that which takes place in many cases of adult hemiplegia from apoplexy. The reasons were given why the writer held that in this case the apoplectic attack was due to hemorrhage rather than to embolism or thrombosis. As regards the differential diagnosis between meningeal and intracerebral hemorrhage the lack of convulsions seemed to be of unusual significance. In meningeal hemorrhage convulsions are invariably present, so their absence might argue, other things being equal, in favor of intracerebral hemorrhage. The second case was that of a young man who had had two apoplectic attacks exactly one year apart. The histories of these attacks were very similar to the one given in the first case. Using these cases as a basis, the author of the paper entered upon a discussion of the changes in the walls of cerebral arteries, permitting an effusion of blood into the brain substance. Autopsies on this condition in the young are very scarce, but there was good reason for supposing (reference was made to some recently reported cases of Dr. Osler) that miliary aneurisms occurred in young children, and that fatty degeneration of the cerebral arteries (permitting transudation of blood through the vessel-walls, Recklinghausen) was a not infrequent condition.

The paper was discussed by the President, Dr. Lloyd, of Philadelphia; Dr. Zenner, of Cincinnati; Dr. S. J. McNutt, and Dr. Amidon, of New York, and the discussion was closed by Dr. Sachs.

The Association then adjourned, to meet on Friday morning.

Friday, July 23d—Third Day.

The Association was called to order by The President.

Dr. Burt G. Wilder, of Ithaca, presented the first scientific subject, which consisted in

AN EXHIBITION OF THE MEDISECTED ALINJECTED HEAD OF A MURDERER.

The features of the brain, which was thus hardened and exposed *in situ*, are to be discussed at a future meeting in comparison with another murderer's brain; the specimen was shown in illustration of the value of the method of *continuous arterial alinjection*, which has been applied to other heads, to brains, and to entire bodies (children, a chimpanzee, etc.) in the anatomical laboratory of Cornell University. The main features of the method are: (*a*) the reception of the head within twenty-four hours; (*b*) preliminary washing out of the vessels with chloral (to which, perhaps, weak alcohol might be preferable); (*c*) continuous alinjection for a week; (*d*) continuity secured by a pressure of eighty millimetres of mercury, which was reduced to forty millimetres when the flow became somewhat free; (*e*) gradual increase of the alcohol from sixty-five to ninety-four per cent; (*f*) maintenance of a low temperate (8° to 11° C.); (*g*) accurate division of the head with a fine saw acting in a mitre-box; (*h*) the small cost. The injected alcohol represented 41.5 litres of ninety-five per cent., but about two-thirds was regained; so at $3 per gallon it would cost $11, and at 75 cents (free of tax) only $3.

Dr. James H. Lloyd, of Philadelphia, then read his inaugural thesis entitled

MORAL INSANITY: A PLEA FOR A MORE EXACT CEREBRAL PATHOLOGY.

It was substantially an argument against the use of the term or the existence *per se* of the condition now called *moral insanity*. He would not object to classification and believed that differences must be recognized, but

regarded "moral insanity," so-called, as a disease of the unit, the brain. Moral insanity proceeds upon an abstraction, just such as Locke warns his readers to avoid. It teaches that there is a moral "faculty" in the sense of a distinct agent, which has its own powers, and its own diseases, and which may remain undeveloped in a "mind" otherwise healthy, or may become diseased without at all affecting the health of the other "faculties." It is nearer the truth to say that the whole brain-act of an insane man is wrong—judgment, emotion, memory, and will. To say, for instance, that a man's intellect is sound, and his will diseased, is a sophism, which has more sound than reason.

The discussion was participated in by PROFESSOR JASTROW, of Johns Hopkins, the PRESIDENT, and DR. GRAY, of Brooklyn, all of whom thought it difficult to get rid of the term, and, furthermore, that there were cases to which no other term could be applied that would so well express the peculiar mental condition indicated.

DR. RALPH L. PARSONS, of Sing Sing, felt certain of the existence of moral insanity, but, at the same time, believed firmly that in *all* forms of insanity, with which he was acquainted, all the mental faculties were more or less involved.

The discussion was closed by Dr. Lloyd.

The inaugural thesis of DR. J. RUDISCH, of New York, was read by DR. GEORGE W. JACOBY, of New York, and consisted in the description of

A NEW PORTABLE GALVANIC BATTERY,

accompanied by demonstrations of the efficiency of the apparatus. The essential practical features were, that it was essentially a dry battery, if desired; that the carbon and zinc were separated by a stout piece of asbestos paper, which increased the internal resistance of the cell, facilitated the escape of the hydrogen bubbles, and enabled the battery to be used without a trough. The exciting fluid was a solution of sal ammoniac (1 to 4).

The inaugural thesis of F. X. DERCUM, of Philadelphia, was read by title: "Facts and Deductions bearing on the Action of the Nervous System."

AMENDMENTS TO THE BY-LAWS AND CONSTITUTION.

By DR. R. W. AMIDON, of New York: "The officers shall enter upon their duties immediately after the adjournment of the annual meeting at which they are elected."

By DR. C. K. MILLS, of Philadelphia: "Two Vice-Presidents instead of one Vice-President."

By DR. G. W. JACOBY, of New York: "They (officers) shall be nominated by the Association on the *second* day of the annual meeting" (instead of the first day).

"There shall be two sorts of members, namely active members—not exceeding at any one time one hundred in number" (instead of fifty as at present).

RESOLUTIONS.

DR. L. C. GRAY, of Brooklyn, introduced a resolution endorsing the proposition of the proposed "Congress of American Physicians and Surgeons," and moved that a committee of conference of five be appointed by the president. The resolution and the motion were adopted.

THE PRESIDENT appointed Drs. L. C. Gray, of Brooklyn; J. Van Bibber, of Baltimore; W. Sinkler, of Philadelphia; E. C. Seguin, of New York, and Philip Zenner, of Cincinnati.

OFFICERS FOR THE ENSUING YEAR.

President—L. C. Gray, M.D., of Brooklyn.

Vice-President—John Van Bibber, M.D., of Baltimore.

Secretary and Treasurer—G. M. Hammond, M.D., of New York.

Councillors—B. Sachs, M.D., of New York, and Wharton Sinkler, M.D., of Philadelphia.

The Association adjourned to meet in June, 1887, on the date and at the place to be designated by the Council.

MEMBERS PRESENT DURING THE WHOLE OR A PART OF THE MEETING.

Burt G. Wilder, of Ithaca; L. C. Gray, of Brooklyn; Philip Zenner, of Cincinnati; John Van Bibber, of Baltimore; R. L. Parsons, of Sing Sing; C. K. Mills, W. Sinkler, G. B. Massey, J. H. Lloyd, and F. X. Dercum, of Philadelphia; R. W. Amidon, G. M. Hammond, V. P. Gibney, G. W. Jacoby, S. J. McNutt, C. L. Dana, L. Weber, W. R. Birdsall, E. D. Fisher, and B. Sachs, of New York.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 26, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. H. MARION SIMS presented, in behalf of a candidate, a specimen of

FIBROUS TUMOR OF THE UTERUS.

DR. T. MITCHELL PRUDDEN presented specimens which illustrated

TRAUMATIC PERINEPHRITIC ABSCESS, RESULTING IN TUBERCULAR NEPHRITIS AND COMMUNICATING ABSCESSES OF KIDNEY, SPLEEN, AND LUNG.

A man about thirty years of age was kicked in the left side by a horse three years ago. A perinephritic abscess shortly afterward developed and was opened. A permanent fistula remained, which at times was uncared for, and continued to discharge more or less pus. Patient developed cough with purulent expectoration, and fancied that, after the wound was washed with carbolic acid, on coughing he could taste the latter. He was in hospital suffering from an uncontrollable diarrhœa, had considerable amount of pus in the urine, and finally died from exhaustion.

Autopsy.—Brain not examined. Omentum besprinkled with small gray tubercles. Heart normal. Lungs: Right emphysematous, congested, and œdematous, with few scattered gray tubercles. Left pleural cavity contained about one hundred cubic centimetres yellowish turbid serum and a considerable quantity of fresh fibrin; upper lobe contained a few scattered tubercles; the lower lobe was irregularly solidified, white and smooth in the denser areas. Microscopical examination of this lobe showed interstitial and intra-alveolar pneumonia, with commencing organization of the contents of the air-vesicles. At the base of the left lung was an abscess about three centimetres in diameter, communicating with a small subcutaneous abscess between the eleventh and twelfth ribs, and also through the diaphragm, with an abdominal abscess behind the spleen in the abdominal cavity. Right kidney large; capsule adherent; cortex thick, mottled gray and red, translucent; markings obscure; microscopical—chronic diffuse nephritis; waxy. Ureter slightly dilated. Left kidney: Capsule very thick and surrounded by a dense mass of connective tissue, binding it firmly to adjacent parts. A fistulous opening from the back led directly into a series of ramifying cavities which occupied about three-fourths of the entire organ. These cavities were partly filled with a purulent detritus, their sides were rough, and their walls composed of yellowish, friable, cheesy material. Between these cavities were irregular bands of translucent connective tissue. Microscopically, the walls of the cavities are seen to be composed of tubercle tissue, cheesy material, and connective tissue in a condition of suppurative inflammation. Very little kidney tissue remains. At the upper end of the organ these cavities were in direct communication with a post-peritoneal abscess cavity, which involved about one-fifth of the moderately

enlarged waxy spleen, and communicated, as above described, with the abscess of the lung. Ureter not dilated, and apparently normal. The liver was large and waxy. The villi of the small intestine were in a moderate degree waxy. The mesenteric glands, as well as the lymph glands about the left kidney, were very large and red. The mucous membrane of the bladder was thickened, and covered with a very thick, tenacious layer of mucopus.

Dr. Prudden remarked that the absence of any old cheesy or tubercular lesion than that in the kidney, and the fact that this had been exposed through the fistula to the external world for three years, would suggest the probability that this was primarily a case of local infection through the kidney, becoming general later, as evidenced by the fresh tubercles elsewhere.

Dr. Eugene Hodenpyl presented specimens from a case of

LEUCÆMIA

with the following history: The patient states that up to eight months ago he was in perfect health. At that time he received an injury to the left hand, which was followed by inflammation and abscess of the forearm, which, being opened, resulted in an indolent ulcer. Six months ago, without known cause, an abscess formed in the left thigh. It also resulted in an indolent ulcer. Three months ago patient noticed for the first time a change in the color of his skin, and that he was gradually losing his strength. His appetite began to fail, and he became troubled with frequent attacks of diarrhœa. Two months ago he noticed a swelling in the epigastrium, which was somewhat tender. At the same time anasarca of the feet and ankles developed, which gradually extended upward. For the past six weeks he has been greatly troubled with a cough and dyspnœa, which made it difficult for him to obtain sleep. On account of the dyspnœa he was able to take food only in small quantities. Patient says he has had no hemorrhages.

On admission patient was fairly well nourished. Skin of a peculiar dirty yellowish-white color. The mucous membranes are almost bloodless. The superficial glands throughout the body are enlarged and very hard. The tonsils were hypertrophied, and on the surface of the left one were three small cicatrices, and also one on the uvula. Lungs showed evidences of a chronic bronchitis. Area of heart-dulness increased. A systolic murmur at the apex and a loud anæmic bruit were heard with the first sound at the base. Liver enlarged and painful on pressure. Area of splenic dulness increased and pressure over it caused pain. No fluid was detected in the abdominal cavity. Blood examined two days before death was of acid reaction, and contained a very large increase in the number of white blood-cells. Pulse, 120, and feeble; respiration, 23; temperature, 101.6°, and while in the hospital it varied between 99° and 102°. The patient complained mostly of the dyspnœa. During the night of May 23d there was quite violent delirium, but in the morning patient was rational but very much exhausted, and in the afternoon of May 24th he died.

Autopsy, sixteen hours after death. Rigor mortis not at all marked. Body well nourished. Skin was of a peculiar dirty white color. Brain not examined. Small amount of clear serum in both pleural cavities, and there was fresh fibrin on both pulmonary pleuræ. Both lungs presented the lesions of chronic bronchitis and the pneumonia of heart disease. The pericardial sack contained eight ounces of clear serum. Heart was hypertrophied and dilated, and the cardiac muscle was paler than was normal; its cavities were distended by a large amount of decolorized blood-clots; the mitral valves were thickened. Liver enlarged and fatty. Spleen was enlarged to about three times its normal size. Its surface showed several points of an old perisplenitis. It was soft, and its cut surface, besides showing numerous spots of lighter color than the surrounding spleen tissue, also presented several large, somewhat irregular, masses of a light-red color. Kidneys were enlarged and very pale; on the surfaces were small hemorrhagic spots, and numerous masses of dense, almost white, tissue were scattered throughout the parenchyma. The lymphatic nodes throughout the body were enlarged and very hard. Cross-section through the sternum showed the marrow to be of a red color, and an apparent increase of the medullary space.

The specimen had been examined by Dr. T. Mitchell Prudden, who had made the following report: "Microscopical examination of the spleen shows a considerable degree of acute hyperplasia, chiefly involving the pulp. The kidney shows a moderate amount of chronic diffuse nephritis with circumscribed nodules, formed by an infiltration of the interstitial tissue with leucocytes. In some places the infiltration is moderate in amount, while in others it is so extensive as to have led to the nearly complete destruction of the enclosed tubules."

MULTIPLE STRICTURES OF THE ŒSOPHAGUS—GASTROSTOMY.

Dr. A. Jacobi presented specimens removed from the body of a man, forty-three years of age, a native of Ireland, and a laborer, who, in August, 1885, drank some spirits of ammonia by mistake. He vomited quickly, and for three days had great pain. Since then he has had gradually increasing difficulty of swallowing, especially solids, the dysphagia being more marked at some times than at others. A short time ago he was sounded with bougies, and he says that a small one was passed. For the past four months he has had pain in his right side about the region of the seventh rib, which has been especially severe when he has coughed, or has used his diaphragm forcibly. The patient has lost much flesh. He denies syphilis, gonorrhœa, and rheumatism, but has a well-marked alcohol habit.

On the day after admission to the hospital, May 5, 1886, numerous efforts were made to pass bougies, but they failed. The smallest bougie passed two or three strictures, but became fixed at another considerably nearer the stomach. On May 8th efforts were made to pass still smaller bougies, but they failed, and on May 10th Dr. Jacobi performed gastrostomy. The abdomen was opened with a rather long incision, but it was found necessary to prolong it downward on account of the relatively large size of the liver, until it was finally about three and a half inches in length. The stomach was not opened, but was stitched to the abdominal wall with a large number of stitches to facilitate adhesive inflammation. The proposition was to open the stomach when it had become completely adherent to the abdominal walls, and then treat the strictures of the œsophagus from below.

The shock of the operation was very profound, and lasted three hours. The patient died of exhaustion, May 13th, at 11.35 P.M.

The autopsy was made by Dr. T. Mitchell Prudden, who makes the following report:

Body much emaciated; slight rigor mortis. An incision in left abdominal wall, parallel with free border of ribs, about ten centimetres long, closed, except at its lower end, by sutures; no fluid peritoneal exudation; surface of small intestine presents scattered patches of dull lustre, and the same, with a very little fibrinous exudation on surface of stomach and abdominal parietes, near the incision; abdominal wall firmly and completely adherent to surface of stomach around opening; omentum dull lustre, with greatly congested blood-vessels; mesenteric glands moderately enlarged; blood vessels congested. Heart: About fifty cubic centimetres; slightly turbid, yellowish fluid in pericardial sac; moderate chronic thickening of the aortic and mitral valves, with general slight opacity of the endocardium; a small fibrinous clot, about two millimetres in diameter, adherent to one of the aortic cusps. Lungs: Pleural cavities empty; both lungs show the lesions of emphysema and chronic

bronchitis; both lower lobes contain numerous scattered areas of broncho-pneumonia, and both present irregular patches of fresh fibrinous exudation on pleural surfaces. Spleen: Small; trabeculæ unusually distinct. Kidneys: Small; capsule thick and adherent; cortex thin; markings obscure; cut surface slightly rough. Liver: Small; appears normal. Intestines: Considerable congestion of mucous membrane; otherwise normal. Stomach: Shows much tenacious mucus; irregular pigmentation of the mucous membrane; no evidence of inflammatory reaction about the opening internally. Tongue and epiglottis appear normal. Œsophagus has a normal diameter for 10 ctm. from the tip of the epiglottis. It then narrows for 1.5 ctm. to a circumference of 2.2 ctm., then gradually widens. Just below this first constriction are two small openings leading into a submucous pocket of about one centimetre in area. Below this point the whole œsophageal mucous membrane is irregularly thickened, and presents a very uneven surface.

At 20 ctm. from the tip of epiglottis is another dense constriction about one centimetre long, having a circumference of about 1.2 centimetre. The tube now again widens to a circumference of about three centimetres, the mucous membrane being beset with fibrous cords, patches, and longitudinal thickenings.

At about twenty-five centimetres from the tip of the epiglottis are two openings leading sideways into a five centimetres long, irregular-walled, suppurating cavity, which harbors a couple of fragments of egg-shell.

At thirty centimetres below the tip of the epiglottis the œsophagus rather suddenly contracts, leaving an opening of about three millimetres in diameter. This constriction is about two millimetres long, and below it the œsophagus widens out into the stomach.

The above-mentioned submucous suppurating cavity passes behind the last constriction and opens into the stomach below it.

The anatomical diagnosis is, accordingly, chronic and excessive œsophageal stricture, gastrotomy, commencing acute peritonitis, chronic endocarditis, chronic bronchitis, emphysema, broncho-pneumonia, acute pleurisy, chronic diffuse nephritis, chronic interstitial splenitis, chronic gastritis.

The case illustrated the danger of using œsophageal bougies, however carefully they might be employed. A few years ago Dr. Jacobi presented to the Society a specimen removed from the body of a child, a few years of age, who had swallowed lye. The baby seemed to be doing fairly well, but all at once it died. A bougie had been introduced almost every day, and the child swallowed whiskey and milk quite well. One day pleurisy was diagnosticated.

The post-mortem revealed the fact that the bougie had broken through the mucous membrane, leaving an incomplete fistula which increased in size and finally perforated into the right pleural cavity, where, with the intense pleurisy, was found half a pint of the mixture of milk and whiskey.

Dr. H. Knapp presented

AN EYEBALL AFFECTED WITH CHOROIDO-CYELITIS, PROBABLY CONGENITAL,

which he removed the day before from a woman thirty-seven years of age.

When she was six weeks old her parents noticed two black patches in the upper ciliary region. She could never see with that eye, but it gave her no trouble until three months ago, when the other eye became weak in sight and intolerant of light. This irritation having continued, the blind eye was removed. Before the operation it showed a dull and small cornea, two black elevations in the upper ciliary region, and an enlarged, irregular, and immovable pupil. Behind the transparent lens brownish masses projected into the vitreous, and were distinguishable from tumors only by their ill-defined superficies.

The globe was opened immediately after the enucleation. The vitreous was bloody and perfectly watery. The retina in the posterior half was so thin and firmly adherent to the highly atrophied choroid that only one blood-vessel betrayed its presence. The optic disk showed a marked glaucomatous excavation. The section of the optic nerve outside the eye was reddish. The subvaginal space was enlarged, and its soft trabecular tissue reddish and abundant. From the thickened and irregular ciliary region a thick pseudo-membrane stretched unbroken transversely through the globe. When it was incised serous liquid escaped. This condition is not rare in old degenerative processes of the eyeball.

The most remarkable feature of the case lies in the waking up of sympathetic irritations by a congenitally diseased eye after a quietude of thirty-seven years, during which time the morbid process, though steadily advancing, had caused no discomfort whatever.

Dr. Frank Ferguson presented fresh specimens which illustrated

CHRONIC DIFFUSE NEPHRITIS—CEREBRAL HEMORRHAGE—ENDOCARDITIS.

They were removed from the body of a man, forty years of age, a native of Germany, who was admitted into the House of Relief, May 25, 1886.

According to the history obtained, for the last two days he had complained of rheumatism, and on the day of his admission, of pain in his stomach, for the relief of which he obtained medicine in a drug store. Soon afterward he was found unconscious and an ambulance was called. The patient was found in a comatose condition, the pupils finely contracted (nearly pin-point). Breathing full, very slow (fourteen per minute), and stertorous. Conjunctiva was insensitive, and it was impossible to arouse him. The patient was searched for the medicine, but it was not found. He was taken to the hospital as quickly as possible. Hypodermatic injection of tr. belladonna, ℥lviij., was given, and cups applied to chest.

The patient was closely watched, but there was little improvement, and at 2.30 P.M., May 25th, he died.

He was three hours in the hospital. He had no elevation of temperature. He had no paralysis. His urine was not examined, and regarding him simply as a case of opium-poisoning his heart-sounds were not listened to. His pulse was forty to the minute.

Autopsy, twenty-four hours after death. The inspection of the body presented nothing unusual. The heart was large; there were long, thick, and broad vegetations attached to the cusps of the aortic valve. There was an ulcer one-eighth of an inch in diameter on the ventricular surface of the anterior segment of the mitral valve. The other valves were normal. There was no thickening or retraction of the affected cusps. The wall of the left ventricle was hypertrophied, the cavity dilated, muscular tissue soft and flabby, fibres granular, but no well-marked fatty degeneration. The lungs were intensely œdematous, and moderately congested. There was an infarction in the spleen, white in color, whose base was one and one-fourth inch in diameter; the apex of the infarction was directed toward the hilium of the organ. The kidneys showed signs of chronic diffuse nephritis; the cortices were thin, surfaces granular; there were cysts in cortices, and these organs were smaller than normal. The small blood-vessels showed marked thickening of their walls. There was increase in the fibrous tissue of the liver, with considerable fatty degeneration in the periphery of the lobules. Brain: The convolutions, especially those over the left parietal region, were markedly flattened. There was a large hemorrhage in the floor of the left lateral ventricle. There was recently coagulated blood in the lateral, third, and fourth ventricles. There was hemorrhage in the meshes of the pia-mater, and beneath this membrane, around the medulla, and on either side of the pons. The vessels at the base seemed normal.

The case was interesting to him, particularly, on account of the difficulty of diagnosis which arose between it and uræmic coma and alcoholism.

DR. H. C. COE said that the case reminded him of one of uræmic convulsions, in which he gave one-sixth of a grain of morphine hypodermatically, and about fifteen minutes afterward the patient became comatose, presented the appearance of one suffering from opium-poisoning, and died at the end of thirty-six hours. Before death, however, unmistakable signs of cerebral hemorrhage developed, and the autopsy revealed hemorrhage into the pons.

DR. JOHN C. PETERS read a communication

ON GANGRENE,

received from Dr. Middleton Goldsmith, of Rutland, Vt., which was accepted and voted to be published with the proceedings, after which the Society went into executive session.

Correspondence.

ANTIPYRETICS IN FEVERS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I am in the position of Dr. Fisher in last week's issue of THE RECORD. *I* do not wish to "beard the lion in his den," but your denunciation, in the closing sentence of your editorial of May 22d, of antipyretics in continued fevers, should not pass without some protest against it. Clinical practical facts that will benefit our patients are what we are all after, and are much more convincing than any theoretical reasoning. And I believe careful bedside observation will prove to every practitioner that antipyretics are of the most undoubted benefit in continued fevers. A case of typhoid fever which I have just been attending will illustrate what I wish to say better than any argument that could be used. Therefore I wish to bring out one point in connection with the use of antipyretics, and at the same time urge upon the profession the use of, especially, antipyrin in controlling temperature. My patient (a man of extreme nervous temperament) ran a course of twenty-one days' duration. The evening temperature at the end of the first week was 103.5°. When the evening rise came he would commence tossing and turning in bed, constantly complaining because he could not sleep, and in this manner the nights would pass, and morning would find him completely exhausted. Sponging the surface and the list of hypnotics in full doses were all tried in vain. The thought came, reduce his temperature more thoroughly than can be done by sponging, and possibly he will sleep. Consequently, each evening, two fifteen-grain doses of antipyrin, at four-hour intervals, were given, reducing the temperature to 100.5°, and my patient obtaining from seven to eight hours' sleep, only waking to take his nourishment.

This was repeated each evening as long as necessary. From the time the antipyrin was commenced the case assumed a different aspect; the sleep seemed to rest and refresh my patient, and what promised in the outset to be a case difficult to manage seemed robbed of its severity and power to harm, it going on very pleasantly to a successful issue.

After reviewing my case carefully, I cannot help but feel that the antipyrin proved of inestimable benefit, and that your denunciation of antipyretics in continued fevers is a step in the wrong direction.

Very respectfully,

H. P. CHACE, M.D.

HIGHLAND FALLS, N. Y., July 12, 1886.

NEW YORK DOCTORS.—A correspondent of *The Medical Summary* says that "it is a great mistake to suppose that New York physicians are loafers. They are all workers—*every time.*"

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 18 to July 24, 1886.

PERIN, COLONEL GLOVER, Assistant Surgeon-General. Leave of absence extended one month. S. O. 165, A. G. O., July 19, 1886.

GARDNER, MAJOR WILLIAM H., Surgeon. Granted four months' leave, to take effect August 10th, or as soon thereafter as this services can be spared. S. O. 165, A. G. O., July 19, 1886.

DE WITT, MAJOR CALVIN, Surgeon. Assigned to duty at Fort Sully, Dak. S. O. 66, Department of Dakota, July 14, 1886.

DICKSON, CAPTAIN JOHN M., Assistant Surgeon. Ordered from Alcatraz Island, Cal., to Fort Mason, Cal. S. O. 56, Department of California, July 8, 1886.

COCHRAN, CAPTAIN JOHN J., Assistant Surgeon. Ordered from Fort Mason, Cal., to Presidio of San Francisco. S. O. 56, Department of California, July 8, 1886.

GIBSON, CAPTAIN R. J., Assistant Surgeon. Ordered from Fort Winfield Scott, Cal., to Alcatraz Island, Cal., on return from leave of absence. S. O. 56, Department of California, July 8, 1886.

KANE, CAPTAIN J. J., Assistant Surgeon. Ordered from Fort Ringgold, Tex., to Fort Hancock, Tex. S. O. 85, Department of Texas, July 13, 1886.

CARTER, CAPTAIN WILLIAM F., Assistant Surgeon. Ordered from Fort Concho, Tex., to Fort Ringgold, Tex. S. O. 85, Department of Texas, July 13, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 24, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	8	7
Scarlet fever	24	5
Cerebro-spinal meningitis	2	2
Measles	85	13
Diphtheria	60	27
Small-pox	1	0

PHOTOGRAPHING THE WOMB.—A Swiss physician has described a method of dilating the uterus by means of tents, so that by means of a mirror a perfect view may be obtained of the interior of the organ. Not content, however, with a simple view, he is unselfish enough to desire to obtain photographs of the uterine interior in various diseases of the organ. *La Riforma Medica*, in commenting on this project, thinks the future of woman is sad indeed, if now her womb must not only be felt of, sounded, and measured, but photographed as well.

TO DISGUISE THE TASTE OF QUININE.—Honey is recommended by a writer in *The Lancet* as one of the best disguises of the taste of quinine, and especially valuable to this end when administering the drug to children. The dose should be placed in the centre of a teaspoonful of honey.

A STRANGE TAMPON.—A writer in the *Deutsche Medicinal Zeitung* states that he was called to see a peasant woman in the country, who was suffering from hemorrhage from the genital organs. When he arrived he found her vagina filled with fresh horse manure, and the external genitals plastered over with the same material. The patient insisted that she wanted only some medicine, and would not permit the removal of the tampon. She shortly afterward had an attack of septicæmia.

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Original Articles.

THE TREATMENT OF HÆMORRHOIDS.

BY CHARLES B. KELSEY, M.D.,

NEW YORK.

THERE are, unfortunately, few diseases in which, as in hæmorrhoids, the surgeon is able to assure the patient in every case that he can positively be cured; and a definite and radical cure should always be the object of treatment, unless there is some very positive contraindication against anything approaching a surgical operation. There may be such serious and advanced organic disease in some other organ that even a comparatively trivial operation is not to be considered; but this is very rare. In such a case the patient must be content with palliative measures.

There seems to be a very wide-spread idea among the laity, for which they are generally prompt to give some medical authority, that when a patient has hæmorrhoids he had better bear the ills he has, lest, by being cured, he should incur worse ones. I have never been able to detect the slightest foundation of fact for this notion, and unless the patient is absolutely so far gone toward the grave that it is better to let him die in peace, unless so old and feeble that he cannot bear the least pain or shock, I always advise that he be radically cured of at least this one distressing and exhausting trouble.

The object of treatment is not only to cure, but accomplish this in the shortest time, and with the least suffering compatible with safety, and on this point the surgeon, and not the patient, must be the judge. There is, perhaps, no other disease on which the public consider themselves so well informed as this. They will not only diagnosticate their own condition, but, from newspaper advertisements, and the stories of their friends, they will decide upon their own method of treatment, and then give some chosen physician the opportunity to carry it out, if he is willing, according to their ideas.

Before undertaking any plan of treatment it will now generally have to be explained to the patient. So many "systems" have been advertised in this country; so much has been seen in the daily papers about cure "without knife, ligature, or caustic," and so much has actually been accomplished by the seemingly simple method of carbolic acid injections, that the practitioner will often find himself confronted with this ultimatum by his possible patient: "If you can cure me without an operation, all right; if not, I do not care to be treated." It may be possible and best to do as the patient desires, and cure him without what he considers an operation; but the relation between physician and patient should not be reversed by allowing the latter to dictate his own treatment.

That this is not a trifling matter the practitioners in our smaller cities and towns all know. Every few days they complain that they cannot treat their patients by operation on account of the competition of some quack who uses carbolic acid. For their benefit I have pretty thoroughly explained this method of treatment, and I shall speak of it again now. It is a good thing, but it is not always the best thing by any means, and the educated man, who has many ways at his control, will in the end get better results than the one who advertises his hypodermatic syringe and frequently does not know a hæmorrhoid from a cancer.

Before describing in detail some of the many methods of treating this affection, and discussing the relative merits of each, it will be necessary to distinguish with great clearness between the different varieties of the affection itself. There is no plan of treatment equally adapted to all cases, because hardly any two cases are alike; and the differences may be simple in degree or in kind.

The old division of hæmorrhoids into external and internal is useful, but is in many ways unsatisfactory. There are many varieties both of external and internal, and there is a distinct class which can scarcely be included in either, and which I have been in the habit of speaking of as intermediate.

Beginning with one form of the external trouble, the patient will give a history something like the following: He or she is in good health, and until a day or two past has never had any symptoms of rectal trouble. Quite suddenly, while about the usual occupations of the day, a sense of pain, just at the verge of the anus, is experienced, which steadily grows worse, until it becomes very troublesome. An examination is made by the sufferer, and a small, soft tumor is felt, which is very tender, and which disappears on pressure, but immediately reappears when the pressure is removed. It can be pushed within the sphincter, and the act gives relief, but it is down again in a moment.

After a few hours and some handling the patient is unable to sit with comfort; but the affair is so trivial that he does not care to go to bed, and so keeps around on his feet, and very likely applies Pond's Extract. After going to bed he feels better, and next morning imagines he is nearly well; but after an hour or two the pain is

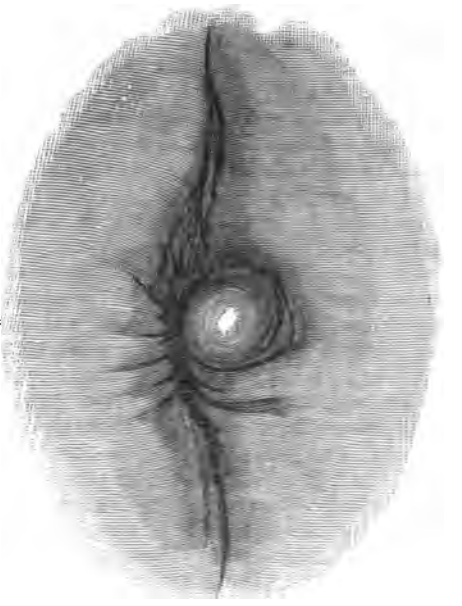

FIG. 1.

worse than ever, and the tumor is larger, harder, and more sensitive than on the day before.

If an examination now be made an external hæmorrhoid of one variety will be found—such as is shown in Fig. 1.

The tumor will vary in size from a pea to a large grape, and is composed solely of blood clot. A small external hæmorrhoidal vein has ruptured, and blood has been extravasated in the delicate subcutaneous connective tissue. The blood shows black under the tightly stretched skin, and the pain is due to the tension.

There are two ways of treating such a tumor. The first and best is to lay it freely open and turn out the clot from its bed. The bistoury should be sharp-pointed and delicate, the tumor should be transfixed from the anal surface outward, and the incision should be in the line of the radiating folds. After such an incision the pain will almost instantly disappear. A little styptic cotton should be placed between the cut surfaces, a large towel folded into a pad applied to the part, and the patient told to sit upon a hard chair, with the compress under him, for fifteen minutes till there is no longer any oozing of blood. The subsequent treatment consists only in bathing with cold water two or three times a day, and the cut will be healed in three or four days.

This operation is so trivial and the relief so immediate that it is generally safe to perform it without any previous explanation to the sufferer; but should it not be permitted another plan must be followed. A cathartic containing podophyllin (pil. podophyllin co.) should be given at once, to secure two or three free actions of the bowels, the patient put upon his back on the bed or sofa, and a rubber ice-bag filled with finely powdered ice placed against the part, and kept there till the pain subsides. Cold usually gives great and immediate relief, but should it not, a poultice may be substituted. Under this plan of treatment the patient will probably be relieved in two or three days, so as to be able to get around with comfort, provided the clot is to be absorbed. In some cases, however, suppuration will occur, and in about a week from the time the swelling first appeared it will open spontaneously and discharge a few drops of pus, to the great relief of the patient. As soon as it becomes evident that this is to be the course of events, poultices should be applied and continued.

This form of hæmorrhoid is comparatively trivial, but it often causes great pain and confines the patient to the house for several days, and the suffering is often increased by improper attempts at treatment. Instead of being freely cut, they are often punctured with a needle by the patient. The result is the escape of a few drops of bloody serum, relief for an hour or more, and then renewed suffering, from the bruising and squeezing which usually attends this attempt at surgery. I have seen them leeched by physicians, with the result of starting a slight bleeding which continued for several days, without, however, giving any relief. They are not infrequently injected with carbolic acid by those who have heard of this method of treating hæmorrhoids, and it is only by great good luck that suppuration can be avoided after this has been done.

Those who have once been troubled with this form of hæmorrhoids are very liable to repeated attacks. The veins are delicate and feebly supported, and a little unusual strain upon them is sufficient to produce an extravasation. This may happen after a constipated passage, an interference with the perfect discharge of the hepatic functions, or from a cause too slight to attract the notice of the patient. The preventive treatment of this, and in fact of all other varieties, consists in the maintenance of as perfect a state of the general health as possible, perfect regularity in the action of the bowels, without straining, and the daily use of cold-water ablutions to the parts. Tobacco and alcohol must both be used in moderation if at all, over-eating must be avoided, and if a careful regulation of the diet will not suffice to produce a regular, daily, natural action of the bowels, a slight laxative must be taken daily. One who is in the habit of having a passage each morning may easily bring on an acute "attack of piles" in a few hours by going to business without taking time to attend to this function, and may be able to relieve it by an enema or a glass of mineral water almost as quickly.

All patients with any tendency toward hæmorrhoids should use cold water to the parts freely, at least once a day. In the morning before dressing, after the daily movement, or at night before retiring it is well to sit on the edge of the bath-tub, turn on the cold water, and with a large sponge apply it freely. The parts should not be rubbed either with the sponge or in drying with the towel; but the sponge full of water should be placed against the parts, and gently pressed out fifteen or twenty times. This is the best tonic, astringent, and anodyne of which I have any knowledge, and its habitual use would prevent a very considerable portion of all hæmorrhoidal difficulties.

The next variety of external hæmorrhoid differs in every respect from the last except in its position. This one contains few blood-vessels, and is composed almost entirely of skin and connective tissue. It is, in fact, a pendulous tag of skin attached to the margin of the anus as shown in Fig. 2.

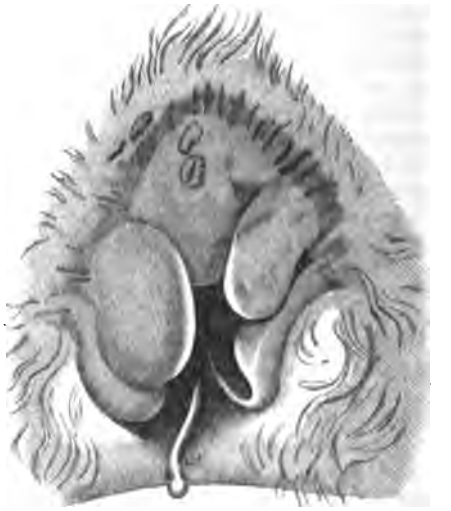

FIG. 2.

Under ordinary circumstances it is not painful, and therefore the surgeon is not often consulted about it, except when it has begun to cause trouble. These tags of skin and connective tissue (often improperly called condylomata) assume many different shapes and sizes. They are often mere pendulous excrescences like the one shown in the bottom of the figure, nearly an inch long, and no larger than a crow-quill, and almost devoid of sensibility, having just sufficient blood-supply to support nutrition. Again, they are attached by a broad base, and two or three of them are joined at their bases, partly surrounding the circumference of the anus, but they still have little sensibility or vascularity. Sometimes one will be found which has become quite large and has an attachment nearly an inch long. Many of them are excoriated on the anal surface, and hence give rise to considerable serous discharge.

The origin of these tumors should be well understood. When found at the anus, in connection with a stricture of the rectum, they are supposed to indicate syphilis as the cause of the stricture. I have no faith in such a statement. To me they indicate nothing but a continued irritation of the outlet of the rectum. They are, according to my experience, as frequent in cancerous as in syphilitic stricture, and often as well developed when there is no serious rectal disease. The hæmorrhoid shown in the last figure, if allowed to run its own course, will make one of these tags. The blood-clot will gradually be absorbed, but not till it has caused a certain amount of inflammatory exudation and hypertrophy of the skin, which will ultimately show itself in the form of a cutaneous excrescence.

Again, this form of tumor is certainly indicative of

more serious disease within the rectum, and should always lead to careful examination. A prolonged sero-purulent discharge from the bowel is amply sufficient by its continued irritation to produce these tumors, but they will often be found without rectal disease, and with no history to account for their gradual formation.

It is safe to say that the surgeon will seldom be consulted for these tumors alone when they are quiescent—that is, when they are not acutely inflamed, and therefore cause no pain. But they are liable to become inflamed on very slight provocation. The same causes which will produce the last variety will cause acute inflammation and suppuration in this. Then the patient presents himself with much the same symptoms as in the last case, except that the pain has been more protracted, because the patient is more accustomed to the annoyance of the tumors and is slower to seek relief. The patient will come with the history that he has had piles for a long time, that they never go back, that generally they cause little annoyance, but for a week back he has had great pain, there has been considerable swelling, and he is unable to sit down with any comfort. An examination will reveal a hard, tender, somewhat œdematous mass of tissue just at the verge of the anus. Its attached base may surround nearly one-third of the anus and may be fully half an inch thick. It cannot be forced above the sphincter, or, at least, cannot be made to remain there. There may be two or three of these tumors. The outer surface is composed of skin, and the inner is smooth and shining, being composed in part of finer skin and in part of the mucous membrane in which the skin ends at the anus. It is plainly a connective-tissue tumor, having its attachment outside of the rectum, and not one composed of blood-vessels covered by the mucous membrane of the rectum.

It is necessary to be thus particular in the description of this form of hæmorrhoid because of the painful errors often seen in its treatment. It never, when uninflamed, belonged within the canal, and it naturally cannot be made to stay there by any amount of force when it is swollen to three times its usual size. It is not a vascular tumor to any extent, and therefore the leeching and scarifications often resorted to never give any relief, while the force used at attempted reductions, sometimes under ether, invariably makes matters worse. If allowed to take its own course it will seldom suppurate, but will gradually subside, and in a couple of weeks the pain will in great measure have disappeared, the tumor always, however, remaining somewhat larger than before the attack.

The treatment of this variety is essentially the same as last, although the cutting to be done is more considerable. It is particularly in this class of cases that cocaine may be used to the best advantage. If the base of the tumor be small, five drops of a four per cent. solution should be injected into it, and when it is no longer sensitive it may be seized with forceps and snipped off with strong scissors. There will be some bleeding, but generally only a little, and styptic cotton, with a compress and bandage, left on for a quarter of an hour will stop it. When the base is larger, say an inch or more in length, cocaine must be used at two or three points, and I prefer the clamp and cautery to the scissors. No after-dressing will then be necessary except cold water, or possibly a poultice to relieve pain. If the tumor be small, the patient will generally be free from pain and able to attend to his business on the following day. If it be larger, and the clamp has been used, it is better to keep him in bed for several days, with cold compresses or poultices to the wounds.

These operations are best performed when the tumors are quiescent and not acutely inflamed, as the pain will then be much less and the recovery much more speedy. But, unfortunately for the patient, he seldom wants anything done till he has had a good deal of suffering, and the doctor is seldom consulted, except during an attack of inflammation. Under such circumstances nothing is gained by waiting for the attack to subside, although the operator must allow for the infiltrated condition of the parts, and not remove enough skin to cause subsequent stricture.

One of the most extensive cases of this form of trouble I have ever seen is shown in Fig. 3. The patient was

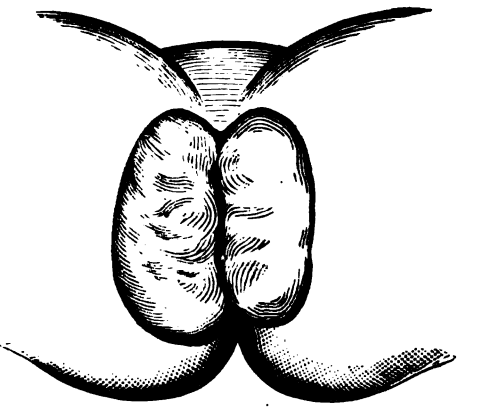

Fig. 3.

under the care of Dr. Hemingway, of this city, with whom I operated in consultation. The man had had hæmorrhoids for years. About a week before I saw him he had been drinking hard, and had ended his spree with a heavy dose of cathartic pills. On waking in the morning he found his piles much worse than before, and entirely irreducible. On examination two hard, œdematous, intensely painful masses were found, forming a complete ridge around the anus, each about the size and shape of the thumb, and meeting in front and behind. They were covered externally by skin, and internally by the smooth, glistening mucous membrane of the verge of the anus. The finger introduced between them passed readily into the healthy rectum, but there was no sphincteric contraction appreciable.

On account of the extent of the disease the patient was treated for four days with absolute rest in bed, poultices, and anodyne applications, but without causing any decrease in the size of the tumors. He was then etherized, and the masses removed with the clamp and cautery. On account of their size, which was too great to permit of grasping the entire base in the clamp, each one was divided at the middle down to the margin of the anus, and clamped off in two sections—the cautery thus being used four times. After this the anus itself was burned through posteriorly and on each side, to cause future contraction of the orifice, for from the very dilated state of the anus and loss of power in the sphincter, there was reason to fear future prolapse after the hæmorrhoids were cured. The patient made a good recovery, with a tight sphincter.

I mention this case as an illustration of the proper method of treatment, though the condition was much more serious than will often be seen.

Supposing now that the patient declines operation, the case must be treated as follows: Absolute rest in bed, laxatives daily to keep the bowels free, an ointment of equal parts of extract of opium and extract of belladonna, with sufficient vaseline to render it soft kept constantly and freely smeared over the parts, and hot poultices constantly applied. By this means the inflammation will gradually subside, and in an ordinary case the patient will be around in a week or ten days. There is nothing else to be done. Attempts at reduction always do harm, and can by no possibility do good, and the same applies to leeching, scarification, and incision. Injections of carbolic acid will cause suppuration, and failing this, can only make the patient's condition more unendurable.

There is still another form of hæmorrhoid which is seldom or never described by writers, but which is still very frequent, and which generally puzzles the practitioner as

to its proper treatment. It may exist alone or in connection with other forms of the disease, and the surgeon, as a rule, will only be consulted about it by the better class of the community, who are in the habit of seeking advice early in the course of any trouble. It consists in a varicose condition of the veins just within and at the margin of the anus. Under ordinary conditions there is no tumor and no bleeding, but, when the patient strains, the veins in this locality swell up, are distinctly visible through the skin, and form a tumor of considerable size, but not well defined or limited, and having no pedicle. The tumor may be lateral or posterior, and there may be several of them. As soon as the straining stops the tumor subsides and disappears.

I have been called upon to treat this condition, existing without other disease, oftener, perhaps, in physicians and in very nervous patients than in any other class; though it is not infrequently united with other hæmorrhoidal tumors for which any patient may seek advice. As a rule, I think, when there is no other trouble it is better to treat it by cold applications and regulation of the bowels, as already described, than by a surgical operation. If, however, the patient be under ether for a more severe operation, it is generally easy to include enough of these tumors in the clamp or ligature to cure them at the same time. As there is no distinct mass to be removed, I never advise a cutting operation for these alone, and thus far have confined myself to one of two methods—the injection of carbolic acid and electrolysis. There seems to be little to choose between them; and yet, if preference is to be accorded to either, it is probably to the latter, on the ground that it is not likely to produce a slough.

If carbolic acid injections be used, the strength of the solution should not exceed ten per cent. of the pure acid. This will generally cause a smarting sensation for a few moments and no further trouble, while a thirty-three or fifty per cent. solution thrown into one of these veins, showing as a black line under the skin, will cause it to immediately change to a whitish hue, and a few days later the patient will appear with an ulcer of considerable size, which will take some weeks to heal. The idea is to produce induration without sloughing, and to be sure of doing this the injection must be weak and repeated several times at intervals.

Electrolysis is not generally very painful in its application, nor is the subsequent suffering very severe.

In the use of the electrolysis a current should be secured sufficient to cause coagulation in the white of an egg in a glass. The positive electrode should be a fine cambric needle, introduced into the centre of the tumor. A sponge over the buttock or sacrum answers for the negative. Cocaine may first be injected into the tumor with advantage, and the positive needle should be introduced and separated from surrounding parts before the negative is applied. The current should be passed for at least ten minutes, and after a short time the cautery action at the point where the needle pierces the tumor will be plainly visible. There will be some pain at the time of the operation, and perhaps considerable on the following day, but after this the tumor will be found considerably reduced in size.

Coming now to those hæmorrhoids which arise within the rectum, and not from the outer margin of the anus, we will first consider the capillary variety. In this there is often no appreciable tumor, but rather a strawberry-like surface, slightly raised above the surrounding level, about half an inch in diameter, and bleeding very freely, often *per saltum* on the slightest provocation.

The following case, seen by me with Dr. Watson, of Jersey City, will illustrate this form of disease and the appropriate treatment:

The patient, a lady, thirty-five years of age, had been married fifteen years, and ever since marriage had been troubled with occasional profuse rectal bleeding. As much as half a pint of arterial blood is said to have passed at a time. There had never been any protrusion, and the blood was passed, not with the stool, but some time after by itself. Frequent rectal examinations by the finger had failed to detect anything abnormal, and arrangements had been made for complete dilatation and examination under ether. Before doing this the usual inspection of the parts was made by gently pulling down and opening out the folds of the anus, and just within it was detected the bright red, slightly raised mass of blood-vessels, which, to my mind, was sufficient explanation of the history. Without making a complete examination of the whole rectum, it was decided first to cure this, and two thorough applications of strong nitric acid, Dr. Watson tells me, entirely stopped the hemorrhage.

This is the only form of hæmorrhoid in which applications of nitric acid will be likely to result in permanent cure, and in this it works so well that it is hardly worth while to try other things. If the application be made thoroughly to the whole surface, a single one will be all that is necessary, in most cases, to entirely cure the disease.

The only other cases in which I use nitric acid are those of well-marked internal hæmorrhoids which bleed freely at stool when protruded, and in which for any reason it is unadvisable to attempt a radical cure. By touching the surface of these tumors with strong acid the bleeding may cease entirely for a considerable time, and the tumors may even diminish in size.

There are cases of internal hæmorrhoids in which no cautious surgeon cares to operate, but they are not frequent. Operative treatment is almost invariably successful and the risks are very slight, while palliative treatment is exceedingly unsatisfactory in its results. Age alone seldom contraindicates an operation, but advanced organic disease of any sort may do so. It is not well, as a rule, to operate for hæmorrhoids which are due to pregnancy, until some weeks after delivery, when the uterus has returned to nearly its normal size. Again, I have grown a little cautious about submitting patients from the country to severe operations, involving protracted confinement to bed in New York during the hot months, and prefer to have the operation performed at some of the neighboring seaside hotels, where cool nights can be assured. With a strong patient in good condition this is not a matter of much importance, but with one, say seventy years of age, the operator must take every advantage if he wishes to avoid anxiety. In the vast majority of cases, however, it is safe to undertake a radical cure by one method or another, and in the few cases where this is not considered best the patient can generally be made more or less comfortable by palliative measures.

In my own practice ointments and suppositories have very little place in treating internal hæmorrhoids, and rectal supporters have none at all. The line of treatment has already been alluded to. Perfect daily regularity in the movement of the bowels and the free use of cold water applications are worthy of the greatest reliance. The latter will be found a much more effective astringent than either tannin or iron.

It is sometimes necessary to treat a patient with internal hæmorrhoids for the complication of strangulation when he is unwilling to submit to anything looking toward radical cure. His piles, owing to some accident, some nervous strain, or irregularity in living, are down, have been down a day or two, and no manipulation on his part will put them back. Examination shows them to be exquisitely sensitive, engorged, and possibly even gangrenous, and the sphincter grasps them with a power which cannot be overcome. This extremity may be the doctor's opportunity, and many a patient is willing to be radically cured after forty-eight hours of such suffering, who has always been too timid before. Under such circumstances nothing is to be feared from an operation, and nothing to be gained by delay. The patient should be etherized, and the tumors removed with the clamp and cautery. The cure will be as rapid as under ordinary circum-

stances. Should, however, the patient still object to radical treatment, the following is the best course of procedure. Place him on his face, with a hard pillow under the pelvis, smear the whole mass and the right hand freely with olive oil, cover the tumors completely with the fingers, and make gentle and firm pressure on the whole mass at once till a part of it slips up the bowel. If a single tumor will give place the others will soon follow.

This is not a matter of half an hour but of one minute. If it does not succeed at the first attempt, it probably will not at all; and the next step is to give ether to the point of primary anæsthesia and forcibly reduce the mass. With ether internal hæmorrhoids can always be reduced when strangulated by a tight sphincter. Should the patient object to this, there is nothing to do but leave him in bed with ice to the parts, and the ointment of opium and belladonna freely applied. The tumors may slough at one or two points even without the ice, and the ice must not be pushed too far on this account; but sloughing under these circumstances is one of nature's means toward a partial cure. Generally after a couple of days' rest in bed the patient will be able to reduce the tumors for himself.

We come now, naturally, to the question of the best way of radically curing internal hæmorrhoids. Of all the methods known to surgery it is unnecessary to deal with more than three—the ligature, the clamp and cautery, and the injection of carbolic acid. These are not enumerated in the order of merit, for no one method is equally adapted to all cases, and the operator will get the most satisfactory results who learns to choose wisely between them in each case as it presents itself.

The question resolves itself very readily to this, and the patient may choose. If he is willing to rest in his room for a few days and take ether, he may be entirely cured by a single operation, without more than a couple of hours' discomfort after coming out of the ether, and perhaps without even that. If, on the other hand, he prefers a treatment of indefinite duration, attended, probably, by a great deal more pain in the end, but for which it will not be necessary to take ether or be confined to the house (probably), he may be equally cured by that. The cure will be equally satisfactory to the patient for a time in either case, but more satisfactory to the operator in the former, because he is sure the disease cannot return, as it may, in a measure, after the treatment by injections.

Between the operation by ligature, and that by clamp and cautery, each practitioner must choose for himself. As far as safety goes, they are about on a par. There is no obvious reason why one should be more dangerous than the other, and an equal number of cases of each would probably prove that neither has much advantage in this regard. Either one may also be relied upon for a certain cure in every case when properly performed. But outside of these two points the operation with the clamp and cautery will give the greater satisfaction to the patient, and hence to the surgeon. Their relative advantages are to be judged from several standards. First, in the amount of pain the patient has to endure after the operation. In the ligature this is often protracted and severe. I have known it to be almost incessant, demanding the constant exhibition of morphine for a week, and the presence of the ligature surrounding more or less living tissue, and probably nerve-filaments, has been to me an all-sufficient explanation. It may be taken as a rule, that a ligature around any tissue within the grasp of the sphincter, no matter how thoroughly the skin may have been cut through before its application, or how tightly it may have been drawn, will give pain, and in this operation one or more ligatures almost always are within the grasp of the muscle. If they are fairly above the sphincters they will be less troublesome, but their presence has seemed to me to account for spasm of the levator, which is about as painful. No matter, however, to what the pain is due, its presence has been a very positive fact in many of my own cases; whereas with the clamp and cautery exactly the opposite has come to be the rule. In this there is no foreign body to act as a source of irritation and muscular spasm. The pedicle is first crushed and then cauterized to a dead and insensitive mass, and all that is left within the rectum is a charred stump. Patients tell me again and again that after the immediate effects of the operation have passed off, that is, in a couple of hours, they felt only a sense of soreness; that, in fact, they are more comfortable after the operation than they usually are after a movement of the bowels, and on the day following they are generally perfectly comfortable, so much so that they begin to want to know why they must stay in bed. Seldom with Smith's operation (that with the clamp) is it necessary to give any morphine except the suppository placed in the rectum immediately after the operation. I can only say that this has not been my own experience with Allingham's operation (that with the ligature), and I refer to exactly parallel cases as to the amount and situation of the tumors removed. The ligature is generally the means employed in New York, and the experience of nurses who have attended such cases and are called upon to care for a patient, after the clamp operation, is often amusing. In the former they will have plenty to do, in the latter nothing.

Again, after the ligature there is very apt to be retention of urine; with the clamp almost never; and this is in itself a great advantage. There is also much less constitutional disturbance after the latter than the former. Not infrequently a male patient will enjoy his cigar after breakfast on the day following the operation, which is a fair test of his general condition.

Another point of great importance to the patient is the length of time he is to be confined to his room and bed, and here again the advantage is in favor of the clamp. Very exceptionally does this method keep the patient confined after the tenth day, and in my last operation the man returned to his home in a distant city on the eighth, with perfect comfort, having then been down to his meals in the hotel for two days before, and about his room since the second day after. In the case preceding that, the lady sat up on the day following, amused herself with the dress-maker after the third day, and left for a pleasure trip on the tenth, assuring me that *at no time* since the operation had she suffered as much discomfort as she usually suffered every day before. In comparison with this it is only necessary to remember that the ligatures do not generally all come away before the tenth day, and that up to this time the patient usually manifests but little desire to be about.

These, in brief, are the advantages of the clamp. Now a few words as to the details of the two operations. Both may be done painlessly with cocaine, but where the operation is extensive, and much tissue is to be removed, it will not generally be found entirely satisfactory. The free nerve-supply of the anus and the difficulty of bringing all the nerves into contact with the solution are the probable explanations of the frequent disappointments attending the use of the drug in operations on this part. Where a single circumscribed tumor is to be removed, it will generally act with perfect satisfaction, because it can be placed exactly where it is needed. Where the whole circumference of the anus, and the rectum for a considerable extent, is implicated, and where it is necessary to dilate the sphincter thoroughly, I have more than once been disappointed in its use, some parts being insensitive, and others by no means so; and this after crowding a four per cent. solution injected hypodermatically at every point which was to be operated upon, to the extent of producing decided constitutional symptoms. In any extensive operation by either method, ether will be likely to be more satisfactory. In some cases, where the pedicle of the tumor is well above the sphincter, and no skin at the margin of the anus is involved, the operation may be done without any anæsthetic; but this applies rather to

cases where a single tumor only is to be removed; and does away with the chance to thoroughly stretch the sphincter, which is always to be recommended.

In both operations the bowels should be moved two or three times on the morning of the day of operation, by a laxative taken before going to bed the night before, and the rectum should be washed out by an enema an hour before operating.

After neither operation should the bowels be confined more than fifty-six hours, and the first movement should be rendered easy by a repetition of the laxative on the night before. This is contrary to the general practice and is a great improvement, as is easily proved by a few trials of the two plans. If the bowels are confined till the tenth day, great pain will be the invariable result of the first motion. The fæces have become hard and voluminous, and the parts are not yet healed. Great straining and suffering are the necessary consequences. Moreover, nothing is gained. The wounds heal no more quickly for the constipation, if as quickly, and the idea that the passages may in some way cause them harm is not founded in fact. By the other plan an easy, natural motion is secured on the third day, which is attended by little or no pain; the rectum is thoroughly cleansed, not only of fæces but of blood and discharges, in the most natural and effectual way; there is less danger of absorption of offensive matter, and the patient, if one of regular habits, feels much better in every way. After the first motion a gentle laxative should be given every night, for ten days longer, to secure one easy, natural passage daily.

After the operation the patient may usually consult his or her own appetite as regards diet. Nothing reasonable need be denied—another point gained by getting the bowels into regular working order.

It is not advisable to allow too much freedom of exercise till the wounds are entirely healed, lest granulation and cicatrization should be delayed. The difficulty with the clamp operation, however, will be to keep the patients from active motion. Ten days of rest will generally be all-sufficient, after which comparative quiet should be observed for another week.

Only a few words will be necessary regarding the details of the operations, so well are they generally understood. Everyone has his favorite instruments, and for my own work I have somewhat, though not to any great extent, modified those of Smith. The clamp which I use has no ivory guards, has a saw edge on both blades, and has handles which give much greater power than the scissor-like rings of his instrument.

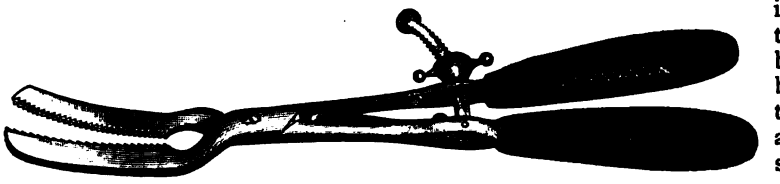

FIG. 4.

With this handle the screw pressure is not necessary. The tumor is isolated with long-handled, tooth-sharp hook-forceps, the clamp is applied and held firmly in the left hand, the tissue to be removed is cut off with curved scissors, and Paquelin's cautery applied to the stump, all in this order and very rapidly. The pressure to the clamp being applied only by the hand, can easily be released to test the efficacy of the cauterization, without the use of the other hand to release the screw, and can as easily be renewed, if necessary, without laying down the cautery iron.

The most delicate point in the operation is to decide just how much tissue to include in the clamp, and this can only be learned by experience. If too little be removed the anus may be left surrounded by unsightly tags, which will be a source of future annoyance; and if too much, an undue amount of contraction may result. After the clamp is in place the part must not be cut off too close to it, but a good stump should be left for the action of the cautery. This should be thoroughly applied over the entire cut surface at a reddish-black heat. The clamp may then be loosened a little, and if any bleeding point appears on the charred surface it must be tightened again, and the cautery reapplied to the bleeding point till the clamp can be removed and the surface remain perfectly dry. The clamp while in place will stop all hemorrhage, but it does not crush the vessels, and they will bleed again as soon as it is removed, unless their mouths be thoroughly closed by the cautery. A grain of opium and half a grain of belladonna, in suppository, should be introduced after the operation, and no dressing will be necessary unless there be some oozing of blood from the points where the scissors have been used in the skin to make a groove for the clamp. Then a pad and bandage may be applied for a few hours, after which all that will be necessary is a little absorbent cotton smeared with vaseline.

The method of carbolic-acid injections can only accomplish by repeated operations what the clamp and cautery does by a single one. Each injection is a surgical operation, and may cause greater pain and longer confinement by its effect upon a single hæmorrhoid than the operation with the clamp will entail in effecting a radical cure of the disease. I do not mean to say that this will be the case, only it may be, and the operator must be prepared for it. This is in itself a great objection. It prevents the surgeon from giving any positive prognosis as to the time necessary for a cure, or as to the amount of trouble, pain, and confinement the patient will have to endure. All he can promise is a cure in the end, and one which, if things go well, will be very satisfactory, in that it involves nothing that the patient considers a surgical operation, and no confinement to the house. He cannot, however, promise that things will go well.

Perhaps this point may be illustrated more clearly by the report of three or four typical cases.

A maiden lady, aged forty, very nervous, and in feeble health, is suffering from four hæmorrhoids. They spring from above the sphincter, come down and bleed at stool, are easily replaced, are distinct each from the other, do not involve the margin of the anus, and are not larger than so many cherries. The case is favorable for injections, and one of fifteen per cent. carbolic acid is made, causing a smart pain at the moment, which soon passes away. Four days later she says she had considerable soreness for a couple of days after the first injection, but does not complain, and a fifty per cent. solution is placed in another tumor. On the next visit she gives the same story, but finds herself decidedly better as to the size of the protrusion and the bleeding, and is much encouraged. Another tumor is brought down and injected exactly as the last, but the immediate pain is more severe. At the next visit her physician tells me he had a good deal of trouble after the last operation; was sent for in the evening and had to give several opium suppositories during that night and the following day. The patient was in bed for three days, but is all right again now. She herself says that the pain has not yet entirely disappeared, and is anxious to know if she must have as much suffering during the remainder of the treatment. It is decided not to make an injection at that visit, but after a few days more it is done. The patient this time is nervous and timid, and a suppository is given at the time. There is pain for a day or two, not as bad as the last, and the case is cured. Ten days later she is entirely satisfied with the result; there is no longer any bleeding or protrusion, and she is so glad she "didn't have to undergo any surgical operation."

This is an average favorable case of a mild form of the trouble. The patient, family, and family physician are all delighted with carbolic acid, but a little thought brings out the following facts: She was under treatment

six weeks, and most of that time, though it might not perhaps have been necessary, she remained in the house. During this time she was in bed and suffering pain at least one week. She took considerable quantities of opium and belladonna. On the whole, she gained nothing by this treatment over that with the clamp, except that she did not take ether and was spared what she greatly feared, a surgical operation. But this, in such a case, is an advantage not to be despised by the laity, no matter how it may appear to the surgeon. It is, in fact, exactly on this inborn dread of an operation that the whole treatment by injections has been built up and still flourishes; and it is often surprising how well satisfied a patient will be to endure a great deal of unnecessary suffering, if by it he or she can escape the knife.

I have given this case as an average successful one. Many will do better, and as many more will do worse. A strong man will have more pain and not lose a day from his business; another will complain only of pain for a couple of hours after the operation; but as far as my experience goes, all suffer in a greater or less degree at some time during the treatment.

Let us take now another case. A man of about sixty has had hæmorrhoids for twenty years. He is of sedentary habits and nervous, but with no other disease than the tumors. An examination shows a very advanced case of long-standing trouble. The tumors can be divided into four chief ones—one posterior, one anterior, and one on each side; but two of these are as large as hen's eggs, and the others only a trifle smaller. They spring from above the sphincter, and are entirely covered by mucous membrane; the sphincter is so relaxed that they protrude with the slightest exertion, and the patient has worn a rectal supporter for years.

It is a beautiful case for the clamp, and fit for that only; but at the outset I am met fairly by the not infrequent obstacle—"no operation." Argument is useless; he has heard of carbolic acid; in fact, his physician has sent him to me for that treatment, and it is that or nothing. Unwillingly I consent.

An injection of thirty-three per cent. is made posteriorly, and with the usual caution and instruction the patient goes home. Two days later he returns. He has had pain—yes, considerable; but he does not mind the pain as long as he can get well. Another injection of the same strength on the left side.

It is four days before he again appears, and they have been passed mostly in bed, and he has used several suppositories, but he is now better, and "if it is no worse than this he can stand it." The tumor injected last time is much smaller, but the posterior one, which was first attacked, is not much benefited, and five drops of pure acid are placed in its centre.

Three days later he reports that he is beginning to be better, that there is less protrusion at stool, and he has left off his supporter. The last injection has not caused a slough, but a hard inflammatory induration in the centre of the tumor. Another five drops of pure acid are injected into the same mass at a little distance from the hard spot, and he then tells me that ever since his last visit he has had considerable difficulty in passing water, which is high-colored and diminished in amount.

Four days later, says he had no very severe pain after the last application, and straining at stool fails to bring down either of the tumors which have been operated upon. Another injection of pure acid into the anterior tumor, the largest of them all. Three days later he reminds me that he is in a great hurry to go away on business, and is anxious to have treatment crowded more rapidly. Had no pain at all after last injection, and fears I did not get it in. The injection has again caused a hard lump of inflammatory induration, but no slough, and a decrease of about one-third in the size of the mass. There is still more work to be done on the first one, and another five drops of pure acid are injected into it, causing no pain at the time, or after, as he tells me two days later.

Thus far all had gone well, and three of the tumors had been treated without accident. An injection of pure acid was made into the last one, that on the right side. Three days later I am sent for to come to him. Before this he has come to me, but he has been in bed ever since the last injection; the urine has been very scanty and passed with difficulty; there is an enlarged and painful gland in the right groin; and a painful swelling at the verge of the anus on the right side, circumscribed, the size of an almond. Eleven days later, the patient being still confined in bed, the abscess at the margin of the anus was opened and a drachm or so of pus evacuated. A couple of days later it was found to have also opened spontaneously on the mucous side of the swelling, just within the sphincter. Ten days later this was healed. The patient had then been under treatment just forty days. He was much better; the tumors were all considerably reduced in size, they still protruded at stool, but went back spontaneously, and he promised to report again in a few days. He never did.

This may be put down as a bad case. The only other one I ever have had came to me, by a strange coincidence, on the same morning, and the two between them cost me a summer's vacation. It is only fair to the method to say, however, that while treating this last one, I was carrying another gentleman, two years older, through the same process, whose tumors were, if possible, even more voluminous, and who was entirely and satisfactorily cured by six injections during fourteen days. He was a man of hardier constitution and greater nerve.

In my other bad case an injection of the acid into a small tumor, just within the sphincter, was followed by a severe ischio-rectal abscess, lymphangitis running up the rectum, and enlarged glands in both groins. After the rather diffuse phlegmon had limited itself, the usual operation for large abscess in this region was performed; but the incision had to be carried into the bowel, and the patient only recovered after weeks of treatment.

Out of many hundred injections of carbolic acid this is my only really unfortunate case, the others have been satisfactory in doing what they were intended to do, and, perhaps, this is no greater a proportion than could fairly be counted on in any surgical procedure. The method can hardly be considered a dangerous one, or else it would more often be heard from in the hands of the ignorant pretenders who succeed in living by practising it. As to the details of its application, I have already said enough in former communications; we are now more especially interested in its comparative advantages and disadvantages.

In the first place, there is no doubt that by using it with sufficient thoroughness a cure can be obtained in every case. But, on the other hand, a hæmorrhoid which has simply been deprived of a part of its vascular supply, and, in consequence, has become so small and hard that it neither bleeds nor protrudes, is not as radically cured as one which has been entirely removed, nor has the surgeon the same confidence that it will never recur. Where ulceration and sloughing are produced by the injections the case is different, for then there is an actual loss of tissue, accomplishing the same end as the clamp or ligature.

When a slough is produced the patient will have more pain, and often will be confined in the house a longer time than after the clamp operation. A single slough will do this, and yet several may be produced in a single case before the cure is complete.

These ulcers heal spontaneously as a rule, but not as quickly as do the wounds made by the clamp and cautery or the ligature.

It is impossible to tell in any given case whether an ulcer will be produced or not; and as the amount of pain and the length of the treatment depend almost entirely upon this point, it is equally impossible to give the patient anything but an approximate guess as to these things. This will be found in private practice a great

practical objection, for the matter of time is often very important. With the clamp the patient may be safely assured that he need not remain in the city more than ten days or a fortnight at most; with injections no such assurance can be given. Sloughs are certainly, as far as my experience goes, almost entirely independent of the strength of the solution or the dissolving medium, and I have experimented with every strength from ten per cent. to pure acid, and with various media. Sperm oil is supposed to be less irritating than glycerine, but I have not found it so, and it is much less agreeable to handle. Neither does pure almond oil seem to possess any advantage. As seen in one of the cases reported in full, pure acid failed again and again to set up a slough, and yet a ten per cent. solution of the acid will do it not infrequently, and so will the pure. The stronger injections cause no more immediate pain than the weak, and the subsequent pain, when no slough is produced, is not generally very prolonged. The most frequent report is that it began two or three hours after the injection, and was pretty severe for a few hours, then passed away. Sometimes it does not come at all.

There is another complication that I dread more than sloughing, though the latter can hardly be called a complication, and that is small marginal abscesses, such as is described in the second case. This will appear within two or three days as a painful tumor just at the verge of the anus, distinctly circumscribed, not much larger than a large grape, projecting sharply from the surface; and it is really an external cutaneous hæmorrhoid caused by the irritation of the work going on in the rectum above, and it will almost invariably suppurate. This means about ten days of sharp pain, worse than that caused by the injection of internal tumors, even when they slough, and it requires a good deal of nerve for a patient to keep about under these circumstances. It should be poulticed and incised as soon as pus is formed. If allowed to discharge itself it will break frequently on both cutaneous and mucous surfaces, and a small bridge of tissue will be left between the two openings, which should be made into one with knife or scissors. This is not serious—nor is it pleasant. When the patient is well he forgets it and is satisfied; and yet it was the last straw that cost me my patient in the second case.

This form of trouble is due to irritation higher up, but if hæmorrhoids at the verge of the anus, covered with skin on the outer aspect, be injected, they will also suppurate in the same way.

There is one more objection to this method which I cannot but think is more theoretical than practical. It is claimed that starting an inflammatory process in a tumor still connected with the general circulation, and with no precautions to limit the process, is in itself dangerous and liable to set up phlebitis or cause embolus. This, of course, may happen, but as a matter of fact it does not, any more than it does in the somewhat analogous operation upon nævi of the scalp with the hot needle. An injection of pure carbolic acid, or even of fifty per cent., destroys whatever it touches in the animal tissues, and the extent of the process very quickly limits itself. Even fifteen per cent. placed in a large vein at the anus causes instant coagulation, entirely stopping the circulation, and a ligature around the vessel could hardly do more.

To sum up, now, with regard to this method. In many cases it will give perfect satisfaction, and the patient avoids the operation which he fears. It is best adapted to small or medium-sized tumors which are distinctly pedunculated and spring from the rectum above the sphincters. In cases involving the margin of the anus and implicating the skin it will greatly reduce the size of the tumors, but it does not give as perfect a result as an operation by which the redundant tissue is actually taken away. In cases of extensive disease it will effect a cure, but the process is liable to be attended by more suffering in the aggregate, and to take much more time than either the ligature or the clamp.

There is an exaggerated idea in the minds of many practitioners regarding the harmlessness and freedom from accident of this plan of treatment. One of them related to me, not long since, how by invitation he spent half a day in the office of a celebrated travelling rectal specialist, who received his medical training in the dry-goods business, and watched him inject hæmorrhoids with a secret remedy. The patients came in from all directions, and the story was invariably the same—no pain at any time, no complications or accidents, nothing but the most perfect satisfaction and cure. The explanation is probably that the dissatisfied ones did not return. At all events, surgeons of repute in this country and abroad cannot boast of such eminent success.

Since cocaine became known I have tried many experiments in treating hæmorrhoids by various methods. One has been to snare them off with a small écraseur and silk salmon line, which is strong enough to cut through any tissue except bone, taking them one at a time, and doing it in my office. Many times I have ligated large tumors without feeling it necessary to inform the patient. Unfortunately the clamp and cautery cannot be used without the patient's knowledge. Sometimes I have thrown around a temporary ligature, and after drawing it lightly have injected carbolic acid, and after several minutes have taken the ligature away. Once or twice I have crushed the tumors. But all these methods of treating hæmorrhoids piecemeal are more or less unsatisfactory, and can only be recommended as substitutes for the better operation with the clamp.

After all has been said, I can only add that the most satisfactory cases of hæmorrhoids, of moderate or great severity, which come to my notice, are those in which the patient says at the outset, "Cure me as you think best." In them I use the clamp and cautery. They seldom cause a moment's uneasiness, and the result is always very gratifying.

The Madison, 25 Madison Ave., Madison Square.

THE CLOSURE OF CLEFT OF THE HARD AND SOFT PALATE, AT A SINGLE OPERATION, WITH A BRIEF REPORT OF A RECENT CASE.

By W. R. WHITEHEAD, M.D. (University of Paris),

Denver, Col.

Ex-President of the Colorado State Medical Society; late Professor of Anatomy in the Medical Departments of both the University of Denver and of the State University of Colorado, etc.

It is in fact largely from a sense of duty that I write this article, as the defender of a very useful operation for cleft palate, which, in my opinion, has been neglected, and which should be better understood and more extensively known, and which in more skilful hands than my own, and with less experience, would produce equally as good results, if not better.

It is useless to deny that the operation for cleft palate is a most delicate, difficult, and complicated one; but, notwithstanding, its exact and successful performance is within the reach of any intelligent and painstaking surgeon, once that the proper method be adopted and thoroughly understood. If some eminent surgeons have not met with desirable success, it is, I believe, because they have not given that careful attention and time to its study that possibly has distinguished their efforts in other directions. It should never be lost sight of that there are some fundamental facts underlying success in this operation, as in others, which cannot be ignored or lightly passed over, and one of these is that the muscles should be completely cut, and herein is where I find Dr. George Arthur so radically in error, and who does not tell us that he has ever attempted on the living subject the operation which he proposes by such profuse illustration.[1]

[1] See Medical Record, February 20, 1886.

He proposes to combine mechanical and surgical methods to obtain better articulation. The mechanical method I shall not discuss, because I have disposed of that elsewhere (see *New York Medical Journal* of April, 1869). This mechanical method is an expensive and most unsatisfactory makeshift, especially in a growing child, and which should be entirely superseded by the permanent obturation of the cleft with the patient's own flesh by the proper surgical method.

Dr. Arthur's operation appears to be utterly impracticable, and if the mechanical part of his treatment depends on his operation, it must completely fail. He says: "The first step in the treatment is to unite the two halves of the uvula and soft palate as completely as possible. This may be done," he observes, "by freshening their edges and securing them together with sutures, preferably the perforated-shot suture." Now, he says nothing about first cutting the palate muscles to keep them quiet, and thus prevent by their constant action the sutures from cutting out in twenty-four hours, or in less time, and which they will inevitably do. But, continues Dr. Arthur: "If the cleft is too wide for this to be done without undue tension of the parts, small portions of the posterior and internal borders of the free edges of the palatine processes, large enough only to furnish secure support for a silver wire to be passed through perforations drilled through their centres for the purpose, may be cut off with a fine, sharp chisel under the mucous membrane, which should be completely separated from their inferior surfaces with the periosteum, or fractured off after suitable guiding perforations have been made, as shown in Fig. 1" (see his article cited). "These fragments," he remarks, "should be brought close enough together with a strong wire to relieve the wound of tension." These little square pieces of bone, which the doctor proposes to detach and denude of the periosteum on their under surfaces, would be deprived of most, if not all, of their blood-supply, and inevitably necrose. Besides, what is this done for? Simply with the theoretical idea that these pieces of bone will give support to the muscles of the velum. He tells us further on that no attempt is made to close the hard palate, this being left to the dentist. In view of the successful and striking cases which I exhibited to large numbers of surgeons and physicians in New York City, some years ago, before the old New York Medical Library and Journal Association, it is somewhat surprising to me that my modification and improvement of Langenbeck's operation for muco-periosteal uranoplasty should be so little remembered and understood, and hence I feel that this paper is not without some value. Besides, while in common with most people I am mistrustful of too much self-assertion, for which surgeons, more than physicians, are somewhat noted; yet there are occasions when too much modesty ceases to be a virtue, and I certainly feel now that I am not too self-asserting when I claim, what facts fully support me in saying, notwithstanding my limited experience of only about one dozen cases of successful closure of the hard and soft palate at a single operation, this exceeds the recorded cases of anyone in the United States, and, indeed, I believe of any three surgeons in this country. Why this is the case for so valuable and useful an operation space will not permit me now to discuss.

Further on in his article Dr. Arthur goes on to say: "If the above proceeding fails to relieve all tension on the wound, incisions, partly or entirely severing the tensors and levators, as recommended by Langenbeck, may be made (Fig. 1, *a*, *a*)." See Dr. Arthur's article cited, and in his Fig. 1, at *a*, *a*, opposite the first two molar teeth, marks which show cuts for the *supposed* section of the tensors and levators of the palate. Certainly Langenbeck must have been badly misrepresented, or the drawings are very much wrong, or Dr. Arthur is considerably out of the way in his anatomy of the palate muscles. However, I cannot believe this last, because he discusses very intelligently the action of the superior constrictor of the pharynx. But the importance of this last muscle in its action, I believe, has been generally much exaggerated as regards its useful effects on the velum palati after an operation for cleft palate.

Below I give a very brief report of a case of cleft palate which I closed on the day that I read Dr. Arthur's article—that is, on the 24th of last February. The case was of a little boy, named Harry Ashton, of Denver, three years old, and the dimensions of the cleft are shown in the accompanying kaolatype, Fig. 1.

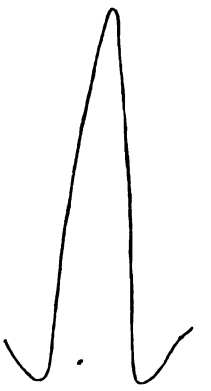

Fig. 1.

The cleft was completely closed at a single operation, and now, on the ninth day, Dr. Dougan being present, the union is complete throughout the entire length; but I shall not remove the soft silver-wire sutures, of perfectly pure silver, until about the fourteenth day, and then allow the side-cuts to heal up. Afterward I shall operate on the lip, which is also fissured. The same method that I have so fully described elsewhere was here repeated. I was assisted by Drs. Dougan, Carlin, and Durbin, of Denver, and also most ably aided by Dr. Norman, an excellent dentist, of Denver, who lent me a dental chair, and which I always prefer to use in this operation when possible. I used my gag, and during the entire period of the operation it was retained in the boy's mouth, who was fully etherized most of the time. (See woodcuts of my gag, at *a* and *b*, Fig. 3.)

On the ninth day after this operation, and at which time this report was written, it was not thought necessary, as affecting the result of the operation, to notice a little mishap which occurred during the operation, and which was the accidental detachment, with the periosteal elevator, of the anterior part of one of the flaps. Perfect and firm union had already occurred the entire length of the sutured flaps; but subsequently retraction of the detached flap near the front part of the former cleft, and near the incisor teeth, left an opening at one of the side-cuts of the size represented at Fig. 2.

Fig. 2.

I attempted, some weeks afterward, when I operated on the harelip, to close this small opening; but the extreme friability of the thick, vascular, muco-periosteal tissue of the palatine vault at this young age, made the flap on one side tear or break across like wet blotting-paper, and I desisted from the operation. With the cleft nearly closed, and the lip now in natural shape, the result is good; besides, the speech is improved. This little mishap, while it prevented the operation on the palate from being a perfectly complete success, yet adds greatly to the interest of this operation as a part of its history, briefly summed up in the following practical experience: If the attempt is made to close by operation a hole in the palatine vault of a child, this can only be done under the same conditions as the closure of an extensive cleft; *that is to say, that there shall be no strain on the flaps or on the stitches.* Even in an adult, in whom the periosteum of the palatine vault is tough and resisting, the cutting of the palate muscles is one of the essential steps necessary to facilitate the approximation of the pared edges of the loosened tissues surrounding an acquired opening, or defect of the palatine vault, as the result of scrofula, syphilis, or gunshot wound. The limits of this article will not permit of a more elaborate explanation.

In regards to gags I shall digress a moment to say that in a work on operative surgery, by L. A. Stimson, M.D., my gag is represented as T. Smith's gag. As Smith's gag may under some circumstances, as when the front teeth are defective or absent, be preferably used to mine, I here give a representation of it, and more especially that mine may not be mistaken for Smith's,

which, indeed, it does not resemble in the least. Fig. 4 shows a kaolatype of Smith's gag. For general purposes, however, I much prefer my own gag.

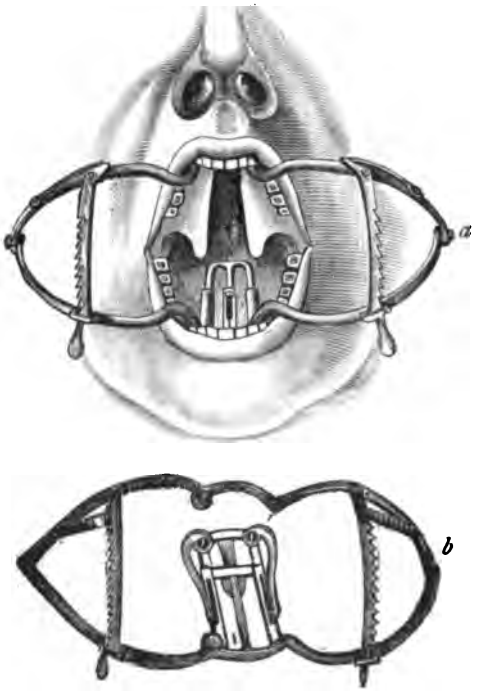

FIG. 3.—Whitehead's Gag.

In this last case, as in all I have operated on, the muscles were thoroughly divided, the side-cuts made, but not so far back as shown in the figure, the periosteum partially detached, the edges carefully pared, and sutures

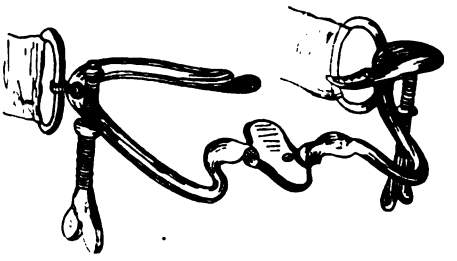

FIG. 4.—T. Smith's Gag.

passed and twisted up as represented in Fig. 5, which I have had copied, one-half size, from my report on "Cleft Palate," read before the American Medical Association of 1869.

FIG. 5.—Showing side-cuts and putting in of the Sutures.

I confidently anticipate a reproduction of bone in the newly formed palatine vault of this little boy, as I have heretofore obtained in young subjects. Indeed it may not be amiss if I refer to the cases of Miss S——, aged fifteen, and of Maria D——, aged seven, cited in the above-mentioned report, and in which cases the evidence of new bone, as attested by Dr. Charles K. Briddon, of New York, and myself, was strikingly manifest. It is astonishing to me the incredulity and opposition with which this operation has met, from the time I presented my first successful case up to the last one, only the other day. The parents of the little boy, Harry Ashton, were told by a Denver physician that the operation was unsuitable before the fourteenth year, and that he ran a danger of his life, etc. Dr. Dougan, however, urged the mother to have me do the operation, and kindly aided me in its performance. If the readers of THE RECORD will refer to the January number of *The American Journal of the Medical Sciences* for 1872, they will see that of two cases reported at that time the first was of a little boy, not quite three years of age, sent to me by the late Professor Charles A. Budd, of New York, and that he bore the operation well, and reacted better than any of my older cases.

It is but justice to myself to say that in nearly all of my cases the success has been complete, as regards union of the parts the entire length of the previously fissured palate, and that in every case the speech has been improved. But I, as others, have been particularly struck with the tightness occasionally of the newly formed palate, and which permits of more or less nasal tone, while, however, rendering the articulation more distinct, which distinct articulation is of the greatest advantage. By referring to the July number of *The American Journal of the Medical Sciences* of 1871, there will be observed the report of the case of an adult, J. C——, aged thirty-five years, the exact dimensions of whose palate, on account of its size, I here show, preferably to others. (See Fig. 6.)

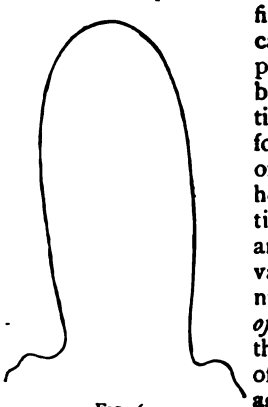

FIG. 6.

I closed this extensive cleft, and on the fourteenth day removed the sutures, the union being complete and firm throughout the entire length of the previous cleft. The late Dr. James L. Little, and Dr. Nathan Bozeman, of New York, with others, were present at this operation. I also cite this case because it was an adult of thirty-five years of age, in marked contrast as to age and the lessened chances as to improvement in speech, to the little boy of less than three years of age. This adult patient, to quote from the journal above cited, was shown to about forty medical gentlemen at the New York Medical Library and Journal Association rooms, and called forth considerable comment about his speech, which was generally admitted to be quite satisfactory, and was an improvement on what it was before. "He was requested to read aloud, to pronounce the letters of the alphabet, and to count. It was explained to the gentlemen present that an operation would be attempted to lengthen the palate." To quote this case briefly, I should say that the operation to lengthen the palate, and which was a purely dissecting-room procedure of my device, proved a failure, and came near compromising seriously the good result that I had already obtained. However, there was, I thought, one or two letters pronounced with less nasal tone after this operation.

AN ARTIFICIAL HEEL BY GRAFTING.—At a meeting of the Academy, M. Berger presented a patient in whom he was able to make an artificial heel by means of a large lump taken from the opposite leg. The graft succeeded completely, and the heel is now perfectly restored, but sensation has not yet appeared.

Clinical Department.

CONGENITAL MALFORMATION OF THE EXTERNAL EAR.

Dr. T. R. Williams, of Beechtree, Pa., writes: "Mrs. T——, of this place, gave birth a few days ago to a female child who had a deformity of the left external ear. The cartilaginous portion was entirely wanting, and the soft parts were in a very rudimentary condition, except the tragus, or what I took to be it, which seemed to have about its usual development. The external auditory meatus was completely obliterated, not even a trace of any opening showing. Whether this condition obtains throughout the entire canal I cannot say, as I made no operation to ascertain this. The child weighed about nine pounds, and was otherwise perfectly developed. I would add that not long since I delivered a member of this same family of a child with hare-lip. I closed the fissure by an operation, using the hydrochlorate of cocaine successfully as a local anæsthetic."

PERITYPHLITIC ABSCESS — INCISION AND DRAINAGE—RECOVERY.

Dr. F. J. Adams, Assistant Surgeon United States Army, of Fort Assinaboine, Mont. Terr., reports the following case: A private, twenty-four years of age, after some premonitory symptoms of general malaise, was taken with cramps in the abdomen, accompanied with slight fever. He received morphine for the pain, but the fever continued, ranging from 100° in the morning to 103° in the evening. On the tenth day there was considerable tympanites, with tenderness in the right side of the abdomen from Poupart's ligament to the false ribs; there was some doughy swelling, but no distinct tumor, and no signs of fluctuation could be detected. During the next four days the difference between morning and evening temperature was on the average 3°, and the general symptoms indicated the formation of pus, though no fluctuation could be detected. On the evening of this day the needle of a hypodermatic syringe was inserted above the crest of the ilium, but no pus was found. The following morning an aspirator needle was thrust into the right side a little above the crest of the ilium and about two and one-half inches posterior to the anterior superior spine, downward and backward deep into the iliac fossa, and through it some very offensive pus was withdrawn. The patient was then etherized and an incision was made about an inch above, and parallel to, the crest of the ilium.

The muscles of this region were healthy in appearance but the transversalis fascia was somewhat thickened, and upon being freely incised there escaped at least one pint of thin ichorous pus of strong fecal odor. The cavity was explored with the finger, but no foreign body could be detected. After the cavity of the abscess had been thoroughly washed out with a solution of carbolic acid, a drainage-tube was inserted and the wound dressed with iodoform and oakum. The following morning the temperature had fallen from 102⅘° F. to 98° F. The cavity was each day washed out with a carbolized solution and the patient did fairly well until the seventh day, when the temperature rose to 101⅘° F., and although there was free discharge from the tube, the symptoms for four days following indicated the retention of pus. Accordingly, he was again etherized, the opening was enlarged, and upon exploration with the finger a pocket of pus was discovered extending farther down into the iliac fossa. Free exit was given and a rubber tube of one-half inch calibre inserted into the cavity for drainage. Each day a soft catheter was introduced through this tube and the abscess-cavity well washed with carbolized solution. The progress of the case from this time was good, and at the end of a month the wound had entirely healed.

Dr. Adams continues: "In the treatment of this case, it is now evident that the exploration with the aspirator needle should have been made as early as the tenth day instead of the fourteenth, or when the great difference between morning and evening temperature occurred, which, with other obscure constitutional symptoms, indicated the probable formation of pus. It was found that the largest size drainage-tube furnished by the Medical Department of the Army was much too small for the purpose of thorough drainage, and a stiff rubber tube, one-half inch calibre, was used, and proved to be entirely unirritating and was extremely effective, the improvement of the patient being constant from the time it was first inserted. I am of the opinion that had such a one been introduced from the first the necessity for a second operation would not have occurred."

SOME ADDITIONAL STATISTICS OF INTUBATION OF THE LARYNX.

Dr. F. E. Waxham, of Chicago, read a paper on "Intubation of the Larynx as a Substitute for Tracheotomy in the Treatment of Diphtheritic Laryngitis, with a Report of 83 Cases," at a meeting of the Chicago Medical Society on June 21st. The author referred to the various modifications that had been made in the instruments during the past year. First, the enlargement of the heads of the tubes to prevent slipping into the trachea; second, the addition of a shoulder to prevent their expulsion; and third, the construction of the tubes with thinner walls, giving greater breathing space and a better opportunity for the expulsion of false membrane. After exhibiting a feeding-bottle and trachea-forceps, the author presented statistics of 306 cases of tracheotomy performed in Chicago, with 58 recoveries, or 18.95 per cent. In 138 cases the ages were given; the average being five years and one month. In contrast to these statistics he gave the result of 83 cases of intubation performed in Chicago, with 23 recoveries, or 27.71 per cent.; the average age being three years and seven months. Eleven cases with 3 recoveries were under two years of age, one being an infant of fourteen months, another of eighteen months, and the other twenty months. Twenty-eight cases with 8 recoveries were under three years; 14 cases with 3 recoveries between three and four years; 15 cases with 6 recoveries between four and five years; 9 cases with 4 recoveries between five and six years; and 10 cases with 2 recoveries between seven and eleven years. Many of these cases were young nursing infants, and many were referred to him because they were too young, or because the cases were too unfavorable to warrant tracheotomy.

A CURATIVE OF EPITHELIOMA.

Dr. D. Tod Gilliam, of Columbus, O., writes: "I desire to call attention to the use of salicylic acid and cocaine as a curative for epithelioma. It so happened, not long since, that I had a small epithelial growth to remove from the face, and resorted to a 20-grain solution of cocaine as a local anæsthetic. After the lapse of some minutes I was surprised to find the diseased parts not only exsanguined, as is usually the case after the use of cocaine, but extremely friable and crumbly. I saturated a good-sized pledget of absorbent cotton with the cocaine and reapplied it, leaving it on for about thirty minutes. At the expiration of that time the diseased mass fell away with the slightest touch of the curette, leaving a healthy-looking surface which has healed kindly. This, I dare say, was not an epithelioma in the sense of being malignant, but was undoubtedly epithelial in character, and has suggested to me the feasibility of using cocaine in the former class of cases. I was the more surprised at the change produced, inasmuch as the usual effect of cocaine s to produce a condensation of tissues, and the bloodless

condition may, for aught I know, depend largely on this condensation. But the fact remains and we cannot gainsay facts. I would suggest as a preliminary to the use of cocaine that the horny layer of epithelium on the surface be softened by the appication of salicylic acid, as we all know from experience that cocaine will not penetrate keratinic substance. In the absence of any case to demonstrate this treatment on, and as, unlike Bill Nye with the comet, I have not almost discovered one, I put this forward hoping that some one will give it a trial. I am not unmindful of the fact that Dr. Shrady and his *confrères* used cocaine in the case of General Grant, or that the drug has now for a long time been in daily use for similar cases, but possibly not of the strength, quantity, and for length of time here indicated."

RADICAL CURE OF HERNIA BY A BUBO.

Dr. F. B. Streeter, of Glens Falls, N. Y., reports the following case: "H——, aged thirty-five years, Irish-American, canal-boat captain by occupation, while loading his boat in the summer of 1882 sustained a severe strain which resulted in a direct inguinal hernia of the left side. It was easily reduced and retained by a truss. In the summer of 1883 he again consulted me, this time for a bubo on the same side. After a long period of extensive inflammation with suppuration, during which he was unable to wear a truss, he recovered from his bubo, and from his hernia as well. Up to the present time his hernia has not recurred, although he is engaged in the heaviest labor. A suitable case presenting itself, I propose to try the effect of vaccination, although I hardly expect to gain results equal to those obtained by the 'bubo' treatment."

A DEVICE INTENDED TO FACILITATE APPLICATION TO THE POSTERIOR NARES OR LARYNX.

Dr. Howard Smith, of the United States Army, writes: "In making applications to the posterior nares or larnyx with the hand-atomizer, a practical difficulty is the inability to control the velum, or tongue, or to use the mirror while both hands are employed in working the instrument. In order to free one hand, I employ a simple device which I have not seen mentioned. The rubber tubing of the atomizer is lengthened to about five feet, so that the bulk can lie on the floor under the foot of the operator, close to the patient's chair. The operator holds the bottle and directs the spray with one hand, employs the other with the palate-hook, tongue-depresser or mirror, while he presses the bulb firmly and rapidly with his foot, producing a finer and stronger spray than when the hand is used. The application of the same device to the various powder-blowers is equally advantageous."

Iodoform in Phthisis.—The administration of iodoform in phthisis and other diseases of the lungs is becoming the regular treatment of these affections. Two Italian professors have made it a special study, and the conclusions they have arrived at are very favorable to the employment of the agent. Professor Chiaramelli, during four years at the Hospital of the Incurables, tried iodoform on a large scale, and found that it lessened the fever, modified the expectoration in its chemical qualities, and thus hindered putrefaction. In cases of caseous pneumonia, the learned professor said he thought that, given at an early hour, it would have a happy influence on the disease. M. Verneuil, who has already used iodoform dissolved in ether, in injections for cold abscesses, has given it also in phthisis, at the dose of two grains twice a day, suspended in ether and enveloped in capsules. Dr. Huchard associates it with creosote (one grain of each).

Progress of Medical Science.

Treatment of Pruritus Ani.—M. Grellety recommends for the relief of simple, non-symptomatic pruritus ani, frequent sitz-baths, ano-perineal douches, or bathing of the parts several times a day with warm water containing boracic acid (one part per one hundred) in solution. During the night starch poultices may be applied, or an ointment, composed of one part of oxide of zinc to five parts of vaseline, may be used. If these means are ineffectual recourse must be had to tents, saturated first with belladonna ointment, and then with a five per cent. ointment of cocaine, introduced within the anus. The food should be simple and bland, and alcoholic beverages should be eschewed.—*Le Moniteur Thérapeutique*, June 7, 1886.

Potassium Nitrate in Acute Rheumatism.—Dr. Grinevitski writes in the *Russkaya Meditsina* of April 20, 1886, concerning a method of treatment of acute rheumatism which he has employed for more than twenty years, with great success. He gives two drachms of potassium nitrate every two hours in a tablespoonful of raspberry syrup. At the same time he applies, night and morning, an ointment composed of extract of aconite, one drachm; ointment of gray oxide of mercury, two drachms; oil of hyoscyamus, one ounce. He says that he was usually able to arrest the disease within one or two weeks, and when treatment was begun early enough he seldom saw the disease invade other articulations than the one originally attacked.

Treatment of Facial Neuralgia.—Dr. de Coninck recommends the application of a one per cent. solution of cocaine hydrochlorate to the deeper portion of the external auditory canal, by means of a camel's-hair pencil, or a dropper. It is not necessary to use a solution of greater strength than this. The writer affirms that the pain, however intense it may be, will disappear at once, and should it return, it may be again relieved by the same means.—*Le Moniteur Thérapeutique*, June 7, 1886.

Hereditary Malformations of the Hands and Feet.—Some curious cases of malformations of the hands and feet, transmitted through several generations, have recently been reported in the *British Medical Journal*. The first series was reported by Mr. Henry A. Fotherby, in the number for May 22, 1886. The patient, J. A——, had a deformity of the hands and feet. In the upper extremity the apparent abnormalities began below the carpus, where only four metacarpal bones could be traced, the fourth and fifth bearing the little and ring fingers; the fingers were closely webbed together, though each had the normal number of phalanges; the missing metacarpal bone was, as far as could be determined, the third. Muscular movements were considerable and permitted of firm apposition of the webbed digits to the fleshy nodule covering the head of the first metacarpal bone. In the feet was found an abnormality, the exact similitude of which had existed in almost every deformed member of the family for five generations. The deviation from the normal seemed to begin immediately below the tarsus, where the metatarsus on each foot bifurcated to form two truncated, cone-like masses; the outer mass, which was the more slender and tapering, supported at its apex the little toe; the inner, and more solid, the great toe. It was impossible to estimate the number of metatarsal bones entering into each cone, as they appeared to be blended together, especially toward their distal extremities. In the internal lay a large ovoid gap. An almost exactly similar condition of things existed in the patient's married sister, whose child was also greatly deformed. The deformities had existed through five generations. Of the first and second generations, as far as known, one individual in each was deformed; of the

third generation there were two; of the fourth, to which the patient belonged, nine out of twelve individuals were deformed; of nine children belonging to five families in the fifth generation, six presented the peculiar malformations. In the same journal, under date of June 12, 1886, Mr. William Anderson relates another remarkable series, the deformities having been transmitted through four generations, affecting twenty-four out of thirty-six members of the family, and showing a tendency to increase in the later scions. The children of the undeformed subjects were all normally developed. The typical deformity was a pincer-like shape of the hands and feet. This predominated throughout the first three generations, except in the last member of the third, who had no thumb; and in the fourth generation the great toe also disappeared in two cases. The error of development was always limited to the digits and metacarpal bones, except in the fourth generation, where there were indications that some elements of the distal row of carpal or tarsal bones were imperfectly formed. The lesion was usually symmetrical. The morbid features were not confined to a mere suppression of parts. Syndactylism, compensatory hypertrophy, distortion of articulations, and multiplication of parts were also present. The manipulative power retained in the deformed parts was surprising, considering the degree and nature of the mutilation. The selection of the subjects for attack or exemption seemed to be quite capricious; neither sex nor order of seniority appeared to influence the manifestation; males and females were affected alike, and the defect was handed down as readily by the latter as the former.

The Prevention of General Tuberculosis by Removal of Local Affections.—In an article on this subject in the *Archives Générales de Médecine* for April and May, 1886, Dr. A. Marfou broaches the theory that tuberculosis belongs to that class of infectious diseases—among which are syphilis, scarlatina, etc.—in which one attack confers immunity against others, as a rule, and he therefore argues that all accessible local tubercular affections should be removed as speedily as possible. He has collected a number of observations of individuals, presenting evidences of cured tubercular adenitis, living for many years as nurses in hospitals, and surrounded by phthisical patients, who never betrayed any symptoms of subsequent tubercular infection. He has also examined a number of persons who had been cured of lupus, and never found any symptoms of pulmonary disease. He believes that scrofulous adenitis occurring in childhood confers immunity against tuberculosis, while a similar affection, first appearing in adult life, is usually accompanied by tubercular disease in the lungs. He says it is very rare to find patients suffering from pulmonary phthisis who have any marks upon them pointing to a previous adenitis or lupus, and he regards the latter affections as caused by an attenuated form of tuberculous virus. Auto-inoculation he regards as very exceptionable, and is consequently in favor of removal by operation, wherever practicable, of local forms of the disease.

Tremulous Paresis of the Heart.—There is no symptom more commonly found in the subjects of chronic alcoholism than tremors in certain muscles, more especially those of the extremities, and, less frequently, of the lips or tongue. There is at the same time a certain diminution, though not abolition, of power. It is well known that alcohol exercises an injurious influence upon the heart, causing at times myositis and fatty degeneration; but the following case, occurring in the service of M. Peter in l'Hôpital de la Charité (*Gazette des Hôpitaux*, June 12, 1886), is interesting as showing that the heart may also be the seat of functional disturbances, excited by this cause, characterized by weakened contractions and tremor. The patient, a man, aged thirty-five, had always been engaged in occupations requiring a considerable exercise of muscular force, and had also been addicted for a long time to the abuse of alcoholic liquors. He had had several attacks of gonorrhœa and gonorrhœal rheumatism. He was received into hospital suffering from delirium tremens. After recovering from this attack he was seen to have tremor of the hands, and on auscultation the heart-sounds were found to be weak, poorly accentuated, and flabby (*un peu flou*). A sphygmographic tracing showed a very short ascending line, indicating a weak heart, and the descending line was wavy and broken throughout its whole extent by a series of minute oscillations. The same characteristics were observed in tracings taken some days later, after complete recovery from the acute attack, showing that the tremor was a permanent condition and not to be regarded as a mere symptom accompanying the delirium tremens.

Paroxysmal Symmetrical Zoster.—Dr. M. Weiss reports a case of herpes zoster affecting the parts supplied by the terminal filaments of the median nerve in each hand. The eruption was accompanied by hyperidrosis of the same parts, trophic disturbances of the skin and nails of the fingers supplied by the median nerve, and by thumb clonus. The latter consisted in a trembling of the thumb, caused by sharp palmar flexion, which lasted ordinarily for fifteen to twenty seconds, but which ceased upon extension of the member. The zoster reappeared at intervals.—*Centralblatt für klinische Medicin*, May 15, 1886.

The Connection between Scarlet Fever and Heart Disease.—Dr. Henry Ashby has made a study of 900 cases of scarlet fever which have been treated at the Children's Hospital, Manchester, during the past five years (*The Lancet*). The question is raised as to the part played by the virus of scarlet fever in exciting or predisposing to an attack of rheumatism. The commonest form of joint-affection which complicates scarlet fever in children is of a form of synovitis, but it is very rarely accompanied by endocarditis. These attacks differ in many ways from acute or subacute rheumatism—they are more fugitive in character, rarely recurring or returning to a joint when once it has left, and exhibiting an especial tendency to attack the synovial membranes on the backs and palms of the hands, finger-joints, soles of the feet, and cervical vertebræ. The attacks mostly take place from the seventh to the ninth day of the fever. Apart from synovitis, attacks undistinguishable from true rheumatism are liable to occur at the end of the third or during the fourth week, much at the same time as nephritis is liable to supervene. This post-scarlatinal rheumatism is commoner in young adults than in children, and in these attacks endocarditis is by no means uncommon. Cases recovering from rheumatic fever, and then attacked with scarlet fever, often suffer from a relapse of the rheumatism; but in what way the poison of scarlet fever determines the relapse in these cases the author cannot say definitely. Nephritis following scarlet fever is a not infrequent cause of cardiac lesions. A certain amount of dilatation of the left ventricle, with more or less compensatory hypertrophy, occurs in most cases of scarlatinal nephritis of any severity. Both endocarditis and pericarditis may take place, and occasionally embolism occurs. Occasionally pyæmia complicates scarlet fever, and then periendocarditis often accompanies the attack, which is generally fatal. No doubt in some cases of scarlet fever there is some dilatation of the heart, but this does not amount to anything of consequence unless there be nephritis as well. In acute nephritis, however, dilatation may take place very quickly, and yet no murmur is detected; and, even when a murmur has been found, the author says he has seen no evidence at the post-mortem examination of endocarditis. This dilatation may be perfectly recovered from, but many cases end fatally.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ICE-CREAM POISONING.

IN our issue of July 17th, when commenting upon the numerous cases of ice-cream poisoning reported this season, we referred to the fact that Professor Vaughan claimed to have discovered the *fons et origo* of the poisonous principle in a new "ptomaine" which he terms tyrotoxicon.

It will be remembered that samples of the noxious cream which played such sad havoc with the festal Michiganders were submitted to Professor Vaughan for analysis, and we now have in the report of the proceedings of the Michigan State Board of Health, July 13th, a detailed report upon "Tyrotoxicon—its Presence in Poisonous Ice-cream, its Development in Milk, and its Probable Relation to Cholera Infantum and Kindred Diseases."

We cannot too highly commend the energetic zeal displayed by Professor Vaughan in the execution of his task, and the promptitude of the secretary of the board in presenting to the profession the results of the investigation. Everything relating to the adulteration of food and food-poisons cannot fail to be of the highest possible interest and importance, both to the public, who are so nearly concerned, and to the profession, who stand in the relation of guardians of the public health.

We regret that the want of space forbids the publication of the entire report in our columns; we can give only a brief synopsis of its contents.

Professor Vaughan first alludes to the fact that about one year ago, after two years of close investigation, he succeeded in isolating from samples of cheese which had produced alarming symptoms in many persons a highly poisonous ptomaine, to which the name tyrotoxicon (cheese-poison) was given.

He then made numerous analyses of milk with the view of detecting the same poison. These tests were followed by negative results until the milk had been kept from three to six months; he then succeeded in getting the poison from one of the bottles. Ten drops of an aqueous solution of this poison placed in the mouth of a dog three weeks old caused, within a few minutes, frothing of the mouth, retching, and vomiting of a frothy fluid, and, after some hours, watery stools.

The facts of the Michigan ice-cream poisoning, as gathered from the testimony presented in the report, are briefly these: Eighteen persons were seriously affected by eating the cream. "The milk of which the cream was made was fresh and sweet morning's milk, with the cream of the milk of the night before from the same cows. The milk was kept in a cool, clean milk-cellar. The custard was made about noon that day, and immediately afterward the process of freezing was begun. The vessels were all thoroughly clean. There was no possibility of anything adhering to them, for they were scalded, wiped, and dried before being used. The only ingredients used were the milk, cream, eggs, best granulated sugar, and the flavoring. The lemon-cream was frozen first, then taken out and packed solid with ice and salt. The vanilla-cream was frozen in the same manner. The best Jennings extract, about the usual quantity, was employed, but not in excess. The cream was eaten in the evening by many people in the village. All of those who ate of the vanilla-cream were made sick, and none of those who ate of the lemon-cream suffered any inconvenience. The milk was the same in both, milked from the same cows the same morning that the cream was made, so that there was no difference in the custard used in making the vanilla-cream and the lemon-cream; but it turned out the one made people sick and the other did not."

The symptoms of poisoning in these cases are thus graphically described by Dr. Moffitt, one of the sufferers:

"About two hours after eating the cream everyone was taken with severe vomiting, and after from one to six hours later with purging. The vomit was of a soapy character, and the stools watery and frothy. There was some griping of the stomach and abdomen, with severe occipital headache, excruciating backache and 'bone pains all over, especially marked in the extremities. The vomiting lasted from two to three hours, then gradually subsided, and everybody felt stretchy and yawned in spite of all resistance. The throats of all were œdematous. One or two were stupefied; others were cold and experienced some muscular spasms. A numb feeling, with dizziness and momentary loss of consciousness, was complained of by some. Temperature was normal, and pulse from 90 to 120. Tongue dry and chapped. All were thirsty after the vomiting subsided, and called for cold water, which was allowed in small quantities with no bad results. After getting out no one of the victims was able to be in the hot sun for several days, and even yet (about ten days after the poisoning) the heat affects myself. I attended twelve persons, besides being sick myself, and all were affected in pretty much the same way. Several complain yet of inability to retain food on the stomach without distressing them. The man who made the cream took a teaspoonful of it, and he vomited the same as those who ate a whole dish, but not so often nor for so long a time. All are affected with an irresistible desire to sleep, which can scarcely be overcome."

The poisoning occurred on June 9th, and four days later, June 13th, Professor Vaughan received a sample for analysis. An aqueous solution of the filtrate was given to a kitten, and produced retching, vomiting, and watery stools. Other experiments were made later, with the production of a similar train of symptoms. Professor Vaughan is of the opinion that the poison is not connected in any way with the ordinary decomposition of milk. He regards it as a chemical body produced by

fermentation. He has not, as yet, been able to obtain the poison in quantities sufficient to enable him to make an ultimate analysis of it.

While Professor Vaughan deserves credit for the industry and painstaking care with which he conducted his investigations, further proof is needed before his theory of the causation of ice-cream poisoning can be accepted as final.

It is a matter of regret that his toxic substance is so indefinite a compound; he does not acquaint us with its physical properties, its chemical formula, or the reagents by which it may be recognized. His theory of its development in that portion of the ice-cream flavored by vanilla seems somewhat improbable. He says: "While the lemon-cream was being frozen, that part of the custard which was to be made into vanilla-cream continued to ferment, and before the freezing process was begun enough of the poison was generated to seriously affect those eating of it."

Since the freezing of cream is usually accomplished in from fifteen to thirty minutes, it seems hardly conceivable that fermentation should advance at such a rapid rate as to convert what a few moments before was an innocuous fluid into a highly poisonous compound.

Again, his theory does not explain the occurrence of poisoning, with the production of identical symptoms, from the use of other alimentary preparations, as pastries, puddings, etc., in which only a minimum quantity of milk is used.

In concluding his report, Professor Vaughan calls attention to the probable relation of tyrotoxicon to cholera infantum and kindred diseases. From the similarity of the symptoms of ice-cream poisoning to those of summer complaints, he argues identity of cause. While this may be important, if true, yet we think much harm may be done by the implied influence of the possible danger of feeding infants with milk. No doubt this will be seized upon by the venders of artificial foods for infants and utilized as a boom for their business.

DIPHTHERIA AND CROUP.

ALTHOUGH the mind of the profession is still divided as to the question of the identity of diphtheritic and true croup, whether we have to deal with one or with two distinct diseases, the majority of the most recent writers on the subject would seem, following Bretonneau, to incline to the belief that there is no practical difference between the affections described under these two names.

The author of the articles on "Croup" and "Diphtheria," in Quain's "Dictionary of Medicine," the late Sir John Rose Cormack, says that "membranous exudation is never a result of simple acute inflammation, or, in other words, there is no such disease as the croup of Home, Cheyne, West, and Sansom." Dr. Thomas J. Walker, in the article on "Diseases of the Larynx" in the same work, takes the same ground, and speaks of "that form of inflammation which is characterized by the formation of a false membrane in the larynx, namely, croup or laryngeal diphtheria." The writer of the article on "Diphtheria," in Wood's "Reference Handbook," Dr. Harold C. Ernst, says that "the question of the identity of the two processes, croup and diphtheria, from a pathological standpoint, may be considered to be settled in the affirmative, so far as to justify the assertion that true croup—membranous laryngitis—is one form of diphtheria." Dr. A. Jacobi, although the author of two separate articles on "Pseudo-membranous Laryngitis" and on "Diphtheria," in Pepper's "System of Medicine," makes no clear distinction between the two affections, and seems to regard membranous laryngitis as but one variety of diphtheria. In describing the former disease, he says that "as a rule the membrane makes its appearance in the pharynx first, from there to descend into the larynx. In other cases, the membrane is found in the bronchi and trachea first, and invades the larynx from below." Professor Steiner, also, in the article on "Croup," in "Ziemssen's Cyclopædia," writes that "the attempt to distinguish croup and diphtheria as two entirely distinct diseases has been unsuccessful, both from an anatomical and a clinical standpoint," and he himself evidently regards the two processes as identical. Dr. Morell Mackenzie argues strongly against the duality theory, and, in his monograph on "Diseases of the Larynx, Pharynx, and Trachea," writes: "Most physicians in this country [England] who have had the opportunity of studying the disease in the wards and in the dead-house now regard croup as a form of diphtheria. At an early period Dr. George Johnson maintained the identity of croup and diphtheria; and later, our great clinical teacher, Sir William Jenner, gave in his adhesion to this doctrine. The renowned Traube, of Germany, had previously accepted the unity theory."

On the other hand, the non-identity of diphtheritic and pseudo-membranous laryngitis has been affirmed by many authorities. Dr. George W. Gay, the author of the article on "Croup" in "The Reference Handbook," affirms his belief in the existence of two distinct forms of the affection, one of which is "an acute, non-contagious and non-infectious disease of the larynx, local in its nature, confined to the upper air-passages, not epidemic, characterized by the formation of false membrane," while the other "is an acute, contagious, infectious, and often epidemic affection, presenting a membranous deposit in the fauces, larynx, and other localities, accompanied by symptoms of blood-poisoning." He states, however, that the first form, primary croup, is at the present time of comparatively rare occurrence. Mr. William Squire, the author of the articles on "Croup" and "Diphtheria" in Reynolds' "System of Medicine," is also a firm advocate of the duality theory, and this opinion is shared in by Fordyce Barker, Austin Flint, Niemeyer, J. Lewis Smith, and others.

The arguments of the dualists have been again very clearly and forcibly stated by Dr. J. M. Clemens, of Louisville, in a paper read before the Medico-Chirurgical Society of that city, and published in the first number of *Progress* for July, 1886. The author seems to think that what he regards as the error of the upholders of the unity theory is to be explained by the fact that they wholly ignore the existence of a non-specific, non-contagious, idiopathic membranous croup, and he maintains that such a disease does certainly exist, and that it is perfectly distinct, and distinguishable from diphtheritic laryngitis. In support of his view he enumerates the points of dif-

ference between the two affections, which we reproduce in parallel columns for facility of comparison.

IN DIPHTHERITIC CROUP.	IN TRUE CROUP.
A prodromal stage of two or more days without hoarseness or cough; more or less profound constitutional disturbance; elevated temperature, which often subsides after the first onset of the disease, sometimes becoming subnormal, to rise again with the invasion of the larynx and trachea.	A sudden onset, or following within a few hours on exposure to cold and wet; little or no constitutional disturbance; elevated temperature, continuing till amendment is established.
Mottled or irregularly reddened fauces, often more conspicuous on one side than the other.	Uniformly pale-red or bright-red—never mottled—appearance of the fauces, which are conspicuously free from loose secretion.
Enlarged and painful lymphatic glands, particularly the submaxillary at the angle of the jaws.	There is never enlargement of the submaxillary lymphatics.
Exudation on the tonsils in the fauces, sometimes in the nares, on the lips, etc.	There is no exudation on the tonsils in the nares or fauces, except, possibly, in rare instances the intense inflammatory action having extended by sympathy of continuity to the territory immediately contiguous to the entrance to the glottis; by strongly depressing the tongue the upper border of the membrane may be seen.
Early appearance of albumen in the urine as a rule.	Albumen is never found in the urine.
A fetid breath of a sweetish, musty odor, similar to that in scarlatina.	The peculiarly fetid breath is never present.

In addition to the signs above enumerated the author adds that diphtheritic croup is a general disease of markedly asthenic character, while true, or pseudo-membranous croup, is a local affection of sthenic type.

The importance of this question is most certainly one which can hardly be overestimated. For it has a bearing not only on the therapeutic management but upon the prognosis and the prophylaxis as well. But, while in the abstract an error is always wrong and to be avoided if possible, yet, unless the physician can persuade himself absolutely that he has to do only with a local, non-contagious, membranous laryngitis, he would do well, in the present state of our knowledge, to regard every case of membranous croup as diphtheritic in character, and to take his precautions accordingly. If err we must, it is better to err on the safer side.

THE PENDJEH ULCER.

At the time of the threatened difficulties between Russia and England, in Afghanistan, the Russian troops, who had been massed in great numbers on the borders of that country, suffered from a peculiar affection resembling, and which probably was one of the varieties of, what is known under the various names of Aleppo evil, Delhi boil, Biskra button, etc. Dr. N. Suski, of the Russian army, observed a number of cases of the disease among the members of a Cossack regiment stationed at Merv, and reports them in *Vratch* of February 27, 1886.

The affection, he says, may be described as passing through three stages. It appears as a small red spot, which gradually increases in size and becomes raised in the centre. It is at first indurated, but soon breaks down and forms a rounded ulcer with irregular borders and sloughing base. In the second stage the ulcer increases in size, and others form in the neighborhood, and soon unite with the primary sore. The suppuration is profuse. At this time the cutaneous lymphatic vessels become irregularly enlarged, giving rise to little kernels beneath the healthy skin at a distance from the ulcer. The larger lymphatic glands do not, however, become implicated. The third period is that of cicatrization. After a variable period the ulcer assumes a healthy aspect, granulations form, and healing occurs under a scab. The cicatrix so formed has a rough, uneven appearance, somewhat similar to that following a burn. The ulcers may appear on any portion of the body, but seem to select by preference the face, neck, abdomen, wrists, and ankles. When occurring on other parts they arise usually from auto-inoculation.

Dr. Heidenreich, also of the Russian army, who made a careful study of the disease, is said to have found a special microbe, which he regarded as the causative agent. The results of treatment would seem also to support this idea, as it was found that sublimate solutions were most effectual in shortening the course and preventing the spread of the ulcerative process. The report of these investigations has not yet been published, but when it is, it will doubtless prove to be an important addition to our knowledge concerning the oriental sore, or Aleppo evil, the nature of which seems at present to be so obscure.

SLEEPING WITH THE HEAD LOW.

Few persons, we suppose, sleep without a pillow or a rest of some sort to elevate the head a little above the level of the body, and very few, if any, would think of habitually going to rest with the feet raised higher than the head. Yet if we are to believe the writer of an article in Pflüger's *Archiv*, Nos. 7 and 8, 1886, the latter is the only rational and proper position during sleep. Dr. Meuli-Hilty is the advocate of this plan. He was engaged in studying the physiological effects of such a reversal of the normal position of the body, and found, among other results, that the circumference of the neck was increased nearly two inches, by reason, chiefly, of a swelling of the thyroid gland. He frequently fell asleep while in this position and occupied in his studies, and found that he always awoke earlier in the morning, felt greatly refreshed, and was capable of much better work during the day than after a night's rest taken in the usual way. He has now slept with his feet higher than his head for the past four years, and his experience leads him to commend the method most highly. He says in this way the brain receives a more plentiful blood-supply and is consequently better nourished, while there is no danger of so much blood passing to the cerebral structures as to cause congestion. This danger is obviated by the enlargement of the thyroid gland, which holds back a certain portion of the blood in its dilated vessels, and which also acts as a regulator of the cerebral circulation by exerting pressure upon the carotids, and thus diminishing their calibre. Another advantage which Dr. Meuli-Hilty claims for his method is that it is prophylactic against pulmonary phthisis. The apices of the lungs

being dependent, receive a more plentiful blood-supply, and are thus rendered stronger, and less liable to become the point of origin of tubercular disease. The writer's assertions may be correct, and his method may, as he claims, be the only rational one, but it is likely to be a long time before he can induce mankind to regard pillows as a useless and harmful part of the bed furniture.

News of the Week.

Ataxic Paraplegia is the name given by Gowers to a form of chronic myelitis in which the lateral and posterior columns of the cord are both involved. The disease is characterized by ataxia and spastic paraplegia, and as the spastic symptoms often predominate, the name above given is not a very good one, and does not deserve adoption.

Lunacy in England.—The report of the Commissioners of Lunacy for 1885 shows that there are now 80,156 lunatics in Great Britain and Ireland, being a ratio to the population of 1 to 349. In the last year the number of lunatics has relatively decreased.

In Acute Suppuration the most important etiological factor, according to Dr. D. O. Krantsfield, is the presence of two forms of micro-organism—stayphylococcus pyogenes and streptococcus pyogenes. These always exist when there is acute suppuration, but they may exist without causing suppuration.

Dr. Breisky has succeeded Professor Späth, of Vienna, who has retired from the chair of obstetrics.

A Public Disinfection Institute has been opened in Berlin under governmental direction. There are chambers capable of completely disinfecting the clothes of two hundred families daily. All conceivable apparatus for thorough disinfection are provided. Such an institution would find large opportunities for usefulness in this city.

Antipyrin as a Hæmostatic, in five per cent. solution, is said by Casati to be an efficient hæmostatic. It may be used both internally and externally.

In Defence of Homœopathy.—A London paper states that it is proposed to establish an association for the purpose of dispelling the ignorance that prevails regarding the homœopathic system. The title of the new organization will be the Homœopathic League, and its objects are, in the words of the prospectus, first, "to give a popular explanation of homœopathy, and to show that it is founded on reason, science, and experience; second, to defend homœopathy from the misrepresentations of its opponents, and to obtain fair treatment for it.

To Select a Site for a New Insane Asylum in Northern New York.—A commission—consisting of Hon. William P. Letchworth, Chairman, Buffalo; James Spencer, Esq., Secretary, Whitehall; Hon. C. C. B. Walker, Corning; Dr. Peter M. Wise, Willard; Dr. Joseph M. Cleaveland, Poughkeepsie—has been appointed by a recent act of the Legislature to locate an asylum for the insane in Northern New York, with "power to receive by gift or to contract for the purchase of such site for the location of said asylum, subject, however, to the approval of the next Legislature, to whom they shall report their action in the premises within ten days after the commencement of the session, together with plans and estimates for constructing buildings suitable to accommodate five hundred inmates. Such plans to admit of such further extension of the buildings as may be necessary to meet the future requirements of the State in providing for the insane." The commissioners present the following as essential points to be considered in the selection of a site for a hospital for the insane: A healthy locality; a tract of good land, embracing not less than five hundred to one thousand acres; easy access by railway, with facilities for side-track connections if desired; a bountiful and unlimited supply of pure, sweet water, the source, if practicable, to be sufficiently elevated to allow of distribution throughout the buildings by gravitation; the site should afford facilities for surface drainage, and for the easy and final disposal of sewage without danger of polluting waters that are used for drinking purposes; the ground about the buildings should be free from secret springs and submoisture. The commissioners purpose visiting the northern counties at an early day, due notice of which will be given beforehand. In the meantime, any inquiries, proposals, or communications in regard to sites may be addressed to James Spencer, Secretary, Whitehall, N. Y.

The Best Method of Measuring Albumen in urine, according to Dr. George Johnson, is by Esbach's tubes, as described in *The Lancet* of January 23, 1886. At present the tubes must be imported from London, or from MM. Brewer Frères, Paris.

The Poison-Ivy.—Dr. Fred. Sumner Smith, of West Hartford, Conn., says: "I wish to correct a statement in a recent issue of The Medical Record. You say, 'The poison-oak, or Rhus toxicodendron, is a rare plant, while the poison-ivy, or Rhus venenata, is comparatively common.' The poison-oak and poison-ivy are identical, and the botanical name is *Rhus toxicodendron.* The *Rhus venenata* is the poison-sumach, or dogwood. The poison-oak (or poison-ivy) is very common, while the poison-sumach is, fortunately, less common. I speak with confidence, from an abundant acquaintance, both personal and professional, with both of them." Dr. Edwin Barnes, of Pleasant Plains, N. Y., further says: "I cannot agree with the statement in a recent issue of The Medical Record, that there is no specific for rhus poisoning. Living as I do in a section of country where Rhus venenata and Rhus toxicodendron are very common, I have at least fifty cases a year, and have never known a case to last over five days when treated as follows. Internally I give the following: ℞. Sodæ sulphocarbolat., ʒjss.; fl. ext. gelsem., ʒj.; aquæ pur., ad fʒiv. M. Sig.: A teaspoonful every two hours. Locally, the patient bathes the eruption every two hours with a nearly saturated solution of hyposulphite of soda. This will cure any case of poisoning by Rhus venenata in three days; the Rhus toxicodendron is more virulent, but I have never, in twenty years, known it to last over five days when treated as above. The worst cases of rhus poisoning that I meet with are where, through care-

lessness, some sticks of Rhus toxicodendron get into the firewood and are burned, or where some one susceptible to the poison stands too near a brush-pile where Rhus toxicodendron is being burned. This susceptibility varies greatly. I have frequently chewed the leaves and bark of Rhus toxicodendron, have stripped the vines of Rhus venenata from the trees and fences, and yet members of my own family will be severely poisoned by simply standing too near to either of the poisonous woods."

IMPRISONED FOR MALPRACTICE.—A Berlin physician has been condemned to two months' imprisonment for malpractice. A woman had an abortion followed by menorrhagia. The physician chloroformed her, with the assistance of a midwife, scraped the uterus with a sharp spoon, and injected liq. ferri sesquichloride. The patient died of peritonitis, and on autopsy several holes in the uterus were found through which the injected fluid had passed into the abdominal cavity.

THE SO-CALLED REVOLUTION IN THE AFTER-TREATMENT OF CATARACT EXTRACTION.—Dr. John B. Roberts, of Philadelphia, sends us the following: "I was interested a day or two ago in some remarks made in one of the current medical periodicals concerning the fear that French dentists have of the use of nitrous oxide as an anæsthetic. The irresistible conclusion was that the dental profession in that country did not know of, or did not heed, the teachings of the clinical experience of their American brothers. To-day I have in a similar way been forcibly struck by reading, in a recent issue of THE RECORD, the notice of a revolution in the after-treatment of cataract extractions, which is called forth by my friend Dr. Chisolm, of Baltimore, having rejected the ordinary cotton and bandage for such cases. It is to me simply astonishing that none of those who heard the subject broached at the recent meeting of the American Medical Association were aware of the fact that here in Philadelphia a similar after-treatment has been adopted and earnestly advocated by Dr. R. J. Levis, for at least twelve years. I, of course, believe that they had forgotten or never heard of the fact As a pupil and assistant of Dr. Levis, at Wills Eye Hospital, Pennsylvania Hospital, and Jefferson Medical College, and in private practice, I know he has not used the cotton dressing since 1874. How long before that time he abandoned it I am unable to state. He simply stiffens the upper lid with two or three small superimposed semi-ellipses of rubber, adhesive plaster, or some similar tissue. Occasionally, though not often, he adds to this a narrow strip from the root of the nose to the malar bone. This dressing has been constantly taught by him to large clinical classes, and discussed years back, when he was connected with the Wills Eye Hospital, with the surgeons of that ophthalmic institution; but, so far as I know, no one follows his example here except Dr. H. Augustus Wilson, formerly eye-surgeon to St. Mary's Hospital, and myself. That it is far preferable to the cotton dressing I am fully convinced, and I never use any other after extraction of cataract or corneal operations. In a clinical lecture given by Dr. Levis in the winter of 1876–77, published in the *Medical and Surgical Reporter*, January 20, 1877, you will find this dressing accurately described. I send you a marked copy. It was described about the same time in the *New York Archives of Clinical Surgery*. As the article in the *Reporter* states, the case then subjected to operation was the five hundred and fourth done by Dr. Levis subsequent to the abandonment of the old flap operation; and, as he had previously recorded one hundred successive cases, with only two complete losses of vision, it may be presumed that his experience was sufficient to warrant his advocating a peculiar method of dressing. I am not able to say whether the hundred cases mentioned were all treated by the simple dressing. Many of his cases were formerly, and are still, treated in open wards, in which the patient is protected from light merely by a screen around the bed and closing of the shutters, or drawing down the curtain of the opposite window. In my little monograph on 'Surgical Delusions,' page 36, you will see 'the foolish practice of padding with cotton and tying up eyes that have been subjected to corneal operations and cataract extractions' described as a delusion needing frequent and loud-voiced condemnation. On page 179, 'Trans. Medical Society, State of Pennsylvania,' for 1884, the same topic is discussed. I call attention to these facts merely to show that new things are often older in principle than we think, and especially to emphasize and corroborate Dr. Chisolm's words, in the hope that the uncomfortable, irritating, and conjunctivitis-producing bandage may be discarded by every ophthalmic surgeon."

AN ABSURD CLAIM.—"Pittsburg is pre-eminently a homœopathic city, owing to the efforts of our distinguished Nashville friend, Dr. J. P. Dake, who, in 1856, treated three hundred cases of cholera without losing a single patient, while the 'old school' physicians were losing one half of theirs." So writes a correspondent of the *Physician's and Surgeon's Investigator*. But no one ever treated three hundred cases of genuine cholera without a death.

COMPOUND TINCTURE OF CAPSICUM.—A mixture which is compounded by M. Poulet has been much praised as a pain-killer. Its composition is: ℞. Tinct. capsici, 200.0; Liq. ammon, .100.5; Essentiæ thymi, Chloral hydrat, āā 10.5; Alcohol, sixty per cent., 1,000.0. M. The pepper, ammonia, and alcohol are digested together for a month, then chloral and thymol added. It is used externally as a liniment, either pure or diluted with oil; internally, in doses of ten to twenty drops. It is recommended for dysentery, enteritis, and rheumatism.

THE DEATH OF DR. MOXON, of Guy's Hospital, London, is announced. He died suddenly of apoplexy or heart disease, on July 22d. The particulars have not yet reached us.

CREMATION AND THE CATHOLIC CHURCH.—By a decree of the Roman Inquisition, dated May 19, 1886, and confirmed by the Pope, Catholics are forbidden to join cremation societies, or to order their own or the bodies of others to be cremated. His Holiness, in confirming the decree, condemns the "detestable abuse of cremating human bodies."

PROFESSOR SEMMOLA, of Naples, has been raised to the dignity of Senator of Italy.

THIRTEEN PREVENTIVE INOCULATIONS AGAINST HYDROPHOBIA have been made in Vienna, by Dr. Ullmann, assistant to Professor Albert.

THE DAILY PRESS AND MEDICAL SOCIETIES.—The Chicago Medical Society has a standing resolution under which reporters for the daily papers are excluded. The rule is practically inoperative, says *The Chicago Medical Examiner*, because the gist of the meetings get out when anything of note or interest to the public occurs. A motion to rescind the resolution, however, recently failed.

NEW LOCAL ANÆSTHETICS.—Dr. Mays claims that a five to ten per cent. solution of brucine is an efficient local anæsthetic, especially useful in relieving pruritus. The same author has shown that hypodermatic injections of one to two or three grains of a solution of theine relieves the pains of neuralgia.

"RECTAL EXPRESSION."—It has not been generally supposed that the rectum possesses any particular expression. If it had, we should say, in consideration of the average state of its contents, that it ought to make a very wry face. We learn from our exchanges, however, that the term "rectal expression," which has been widely used of late, refers to the process of insinuating two fingers into the rectum during the second stage of labor and pressing out the head.

Reviews and Notices.

POCKET MEDICAL FORMULARY, ARRANGED THERAPEUTICALLY. By ALEXANDER HAZARD, M.D., and BERNARD M. GOLDBERG, M.D., revised and enlarged by ABRAHAM S. GERHARD, M.D. Philadelphia: Published by COLLINS, Printer. 1886.

"THE busy and hard-worked practitioner," to whom the "Pocket Medical Formulary" is dedicated, is expected to tuck away in his pocket this little book, which resembles a diary, and to look through its alphabetical list for a prescription to fit the case of which he has made a diagnosis and has not in mind the treatment he wishes to give. It has blank pages for the insertion of new formulæ which it is desirable to make a note of. Such an affair has the appearance of a cook-book and does not seem exactly a scientific method of practising medicine; nevertheless it is not without its use and value if only to find the varied compounded prescriptions of different authorities relative to a disease brought together in this compact form.

A MANUAL OF THE DISEASES OF THE SKIN. By BALMANNO SQUIRE, M.B. Lond. Pp. 194. Chicago: A. N. Marquis & Co. 1886.

EPITOME OF DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D. Pp. 130. Philadelphia: J. B. Lippincott Co. 1886.

BOTH of these volumes are condensations of the knowledge of skin diseases into a very small compass, in order to supply pocket text-books for students. Dr. Squires follows the classification of Williams, that is according to the elementary lesion, as macules, vesicles, etc., while Dr. Duhring follows that of Hebra and Rokitansky, which, he explains, is based upon the anatomy of the skin, the pathology of the lesions, and, to a slight extent, upon their etiology.

Dr. Squires' book is rather more extensive, as its title of "Manual" would imply, than Dr. Duhring's "Epitome." Both are characterized by terseness of expression as well as clearness, and are valuable for the purpose for which they have been published.

INVESTIGATIONS INTO SOME MORBID CARDIAC CONDITIONS. By WILLIAM RUSSELL, M.D., M.R.C.P. Edinburgh: Bell & Bradfute. 1886.

DR. RUSSELL has included in this volume his thesis which he presented for the degree of Doctor of Medicine in Edinburgh, for which he received the gold medal of the University, and the Cartwright prize essay entitled "The Heart in Debility." The whole forms an interesting and valuable contribution to the literature on the subject, and will be read and referred to with profit.

THE YEAR-BOOK OF TREATMENT FOR 1885. Pp. 307. Published by Lea Brothers & Co. 1886.

To review a "year-book" is about as difficult a task for a reviewer as it would be to review a dictionary; nevertheless the reading furnished by such a work is of a most interesting nature. Here within small compass is given the net result, the practical outcome of the myriad medical writings of a year. The physician will find it useful to refer to in the same manner as he would use a dictionary.

THE MEDICAL ANNUAL. By DR. J. E. TAYLOR, F.L.S., F.G.S. London: Henry Kimpton. 1886.

THE "Medical Annual" is a record and review of the year's progress in medicine, surgery, and science, more especially in Great Britain. To boil down the medical literature of the world for a year to two hundred and twenty-five pages of an ordinary volume bespeaks patient industry on the part of the editor, and meaty reading for him who peruses the work. The year, we are told, has not been fruitful in scientific discovery. The establishment of theory by the record of facts has characterized the research.

Space forbids entering into detail, even if one had the courage to undertake to still further compress what has already been compressed to well-nigh the uttermost limit, but the reader can judge how interesting a book must be which can give the latest scientific theory of how a Norwegian salmon can jump up waterfalls and the latest investigations of cerebral localization which will enable surgeons to trephine over the exact spot where the morbid process is situated in the brain.

HOW TO CARE FOR THE INSANE. A Manual for Attendants in Insane Asylums. By WILLIAM D. GRANGER, M.D. Pp. 96. New York: G. P. Putnam's Sons. 1886.

DR. GRANGER has written a clear, concise statement of the care of the insane, well calculated to inspire attendants to look properly after the condition, symptoms, and welfare of those under their change.

The first three chapters of his book, entitled respectively "The Nervous System and Some of its Important Functions," "The Mind and Some of its Faculties," and "Insanity," illustrate the difficulty which one would encounter in preparing such strong meat to make it suitable pabulum for babes. A sentence or two will illustrate our meaning. "Many nerves are given off from the brain and cord and go practically everywhere." . . . "These nerves are white cords of different sizes. The one that goes to the leg, called the sciatic, is as large as the little finger." . . . "Our brains are very busy," etc. . . . "In common language we speak of the mind diseased. This is not strictly true, as it is the brain that is diseased, and, in consequence, we get disturbed mental action."

It is not until the doctor comes to giving practical directions, such as how to receive a patient, give him a bath, feed him, and make his bed, that he floats in smooth waters and becomes truly happy.

MANUAL OF DIFFERENTIAL MEDICAL DIAGNOSIS. By CONDICT W. CUTLER, M.D. New York: Published by G. P. Putnam's Sons. 1886.

LISTS of symptoms of the diseases which flesh is heir to, contrasted with each other, form at once the dryest and most interesting reading, if such a paradoxical statement is permissible, which can fall to the lot of a medical reader; but to the medical student who wishes to become conversant, and be prepared to pass the tribunal of an examination with them, these lists must be terrific. We cannot think that the student can compass the matter properly except by making his own tabulations; he will, however, find it greatly to his profit to study those of Dr. Cutler, which might serve him as a key to correct his own by, since they are models of thoroughness.

A MANUAL OF SURGERY. In Treatises by Various Authors. In 3 vols. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, London Hospital, etc. 12mo. Philadelphia: Lea Brothers & Co.

THESE compactly arranged volumes are intended to give a concise view of the principles and practice of modern surgery, and are composed of short, well-written articles by a large number of leading surgeons of Great Britain. The various subjects are handled with rare judgment, and present the essential facts of clinical practice in a nutshell. It is a successful compromise between the epitome and the more elaborate treatise, and will doubtless serve its purpose in enabling the general practitioner and surgeon in recognizing the leading landmarks of the science. The number of authors is large, and the assignments, judging from the results, have been very judicious. The different volumes are divided into the following subjects, respectively: Vol. I., General Surgical Affections, the Blood-vessels, Nerves, and Skin; Vol. II., The Organs of Locomotion and Special Sense, the Respiratory Passages, Head, and Spine; Vol. III., The Thorax, Organs of Digestion, and Genito-urinary Organs. The editor is a gentleman who has an enviable reputation as a clinical teacher and writer, which in itself is a guarantee of the excellence of his own articles and of those of his co-laborers.

A TREATISE ON DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., Surgeon-General United States Army (retired list), Professor Diseases of the Mind and Nervous System New York Post-Graduate Medical School and Hospital, etc. Eighth edition, 8vo, pp. 945. New York: D. Appleton & Co. 1886.

THE eighth edition of this work speaks for itself in the fact of its existence. The talented author has carefully revised the previous editions, elaborating many portions which subsequent experience and observation have made necessary. A section has also been added on certain obscure diseases of the nervous system, comprising Tetany, Thomsen's Disease, Miryachit, and kindred affections. These subjects are treated, like others in the work, with a master-hand and with the pen of a ready and entertaining writer. The author made his reputation long ago, and that he is able to maintain it his last effort will abundantly prove.

DICTIONARY OF PRACTICAL SURGERY. By Various Hospital Surgeons. Edited by CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, etc. In two vols. 8vo, pp. 1,854. Philadelphia: J. B. Lippincott Co. 1886.

As its title indicates, this is essentially a surgical dictionary. It follows out the traditional plan. The subjects are selected with a view to their importance, are arranged alphabetically with such elaboration of practical parts as is in keeping with the limits and scope of such a work. Each of the various authors is duly credited at the end of his article. As a rule the descriptions are short and very judiciously condensed, and when necessary cross references are made. All the subjects are well worked up, and are abreast of the advanced thought of the day. They are treated of, as far as practicable, in the following order: Cause, pathology, symptoms and diagnosis, treatment and prognosis. As a whole the work fulfils its mission, and will be duly appreciated by the working practitioner who wishes to add new volumes to his reference series.

BRIGHT'S DISEASE AND ALLIED AFFECTIONS OF THE KIDNEYS. By CHARLES W. PURDY, M.D., Queen's University, Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic, etc. 8vo., 288 pages, with 18 illustrations. Philadelphia: Lea Brothers & Co. 1886.

DR. PURDY has written a book which will reflect a fair degree of credit upon himself. His views are well-expressed, and are quite generally accepted by those who have reached the enviable position of authorities in this class of diseases. The illustrations can be duplicated without special difficulty by examining kidneys the seat of acute and chronic changes, as they are met with at the post-mortem table of any large hospital. We regard this as no small degree of praise; for the larger percentage of illustrations of these lesions are of a very inferior order. As a matter of uniformity the author has, in common with most writers, mixed classifications and synonyms somewhat, but, it may be said, not to the special detriment of the original design of the book. One term, however, has been introduced which is fairly open to criticism. "Cyanotic Induration of the Kidney," is the name given to the condition more commonly known as "the kidney of heart disease," or "chronic congestion," or "passive hyperæmia of the kidney." The author's description of the kidneys that belong to this group is sufficiently clear, and includes many of the points which have been already described; but we had not heretofore been made aware that the condition exhibited a blue color. "It is, in fact, a condition of passive or venous congestion of the kidneys," is the language of the author, and the title of his chapter would be materially improved by making it include the idea thus expressed, rather than the condition of cyanosis. The book is divided into nine chapters: 1, Albuminuria; 2, Uræmia; 3, Acute Nephritis; 4, Chronic Nephritis; 5, Cirrhosis of the Kidney; 6, Scarlatinal Nephritis; 7, Puerperal Nephritis; 8, Lardaceous Degeneration of the Kidneys; 9, Cyanotic Induration of the Kidney. It is printed with large type upon heavy paper, and has a bibliography and an index. Dr. Purdy's well-written papers on testing the urine for albumen have already made for him a good impression, which will not be erased by the present volume, that contains so many practical points concisely expressed.

THE INTERNATIONAL MEDICAL CONGRESS.—The Vienna correspondent of the *Weekly Medical Review* writes: "At Hamburg, at Leipzig, and here, I have interviewed quite a number of the principal men in the profession, as to their intention to visit Washington and attend the World's Medical Congress next year. Gentlemen of the American Medical Association, who lately met at St. Louis, you thought you disinfected that wound produced in your ranks by the discussion of the Code question. At least you put a plaster over it, bandaged it up, and all went away smiling; but let me tell you that I find here, by talking with the leading men, that your last operation has produced very little impression on the medical mind here. The general impression is that the leading minds in our profession are at loggerheads, and that sufficient harmony cannot be attained to make the Congress a success. Then, again, you have no idea of the repugnance that many of these men have to a long sea-voyage."

Reports of Societies.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-second Annual Meeting, held at the Pequot House, New London, Conn., July 21 and 22, 1886.

WEDNESDAY, JULY 21ST—FIRST DAY—MORNING SESSION.

THE meeting was called to order by the President, DR. WILLIAM F. NORRIS, of Philadelphia.

Dr. Peters, of New York; Dr. Hubbel, of Buffalo; Dr. E. Fridenberg, of New York; and Dr. Cutter, of New York, were invited to take part in the proceedings of the Society.

DR. H. KNAPP, of New York, read a paper entitled

PYOGENIC MICRO-ORGANISMS, WITH DEMONSTRATIONS AND EXPERIMENTS.

Dr. H. Knapp made some general remarks with reference to the dependence of suppuration on certain kinds of micro-organisms—the pyogenic bacteria. He exhibited these bacteria in numerous test-tube specimens on agar-agar and also under the microscope. He showed two rabbits which he had operated on the day before, for cataract, in the presence of members of the Society. Extraction had been made on the left eyes with clean instruments, and on the right eyes with instruments contaminated with staphylococcus pyogenes aureus. The left eyes were free from secretion. The wound of one eye was in a doubtful, the other in a good condition; whereas the right eyes discharged matter profusely, and were in a state of intense destructive inflammation. He then operated on two other rabbits in the same way. The four rabbits were examined the next day. The right eyes in all were suppurating, the wounds of the left eyes in three of the rabbits were in good condition. In one of the first two rabbits it was suppurating. This eye had become infected from the right eye of the other rabbit. They had been kept in the same box, and the operator had found them with their heads in contact.

In reply to a question as to the best method of cleaning instruments, Dr. Knapp said that the use of antiseptic solutions had the disadvantage of dulling the edge of cutting instruments. His experiments had shown him that simple washing with water in the case of smooth instruments, followed by friction with a clean towel, renders them bacteriologically clean. Where an instrument has a groove, or is at all rough, it is much more difficult to clean. Instruments like forceps may be put in the antiseptic solution. It must be remembered that in the majority of operations a certain quantity of infecting material is required to produce any effect. Where there is a free escape of liquid from the wound the material is washed off, but where there is a sucking-in process the danger is much greater.

DR. HUBBEL, of Buffalo, asked Dr. Knapp if there were not certain conditions of the eye which would favor infection of the wound after operation.

DR. H. KNAPP, in reply, said that a lachrymal discharge, with a certain amount of conjunctivitis, furnishes a favorable soil for the growth of bacteria. In operating in such cases, the discharge should be completely removed. A certain quantity of the pathogenic bacteria is required to produce infection. He had pricked the cornea and covered the wound with an emulsion of the bacteria. In only one out of every four or five did abscess develop.

DR. J. A. ANDREWS, of New York, said that mere contact of the microbe with the wound is not always sufficient to produce suppuration, especially in the case of the cornea, where the discharge is liable to be washed off. Where the material has been introduced into the wound and kept there for a short time he had never seen a failure.

In the cleaning of instruments he uses simply clean water, which has been boiled for some time.

DR. C. S. BULL, of New York, gave

AN ANALYSIS OF ONE HUNDRED CASES OF EXUDATIVE RETINITIS OCCURRING IN THE COURSE OF BRIGHT'S DISEASE.

He included only those cases which he had examined and followed to their termination. All cases due to scarlatina or pregnancy were excluded. Out of 500 cases examined only 108 fulfilled these conditions. The ophthalmoscopic examinations were made by the author, and the urine was always examined.

The prognosis with reference to the duration of life is very unfavorable. Of the 113 cases, 86 have died—57 during the first year and 12 during the second; 17 were still living, but 14 of these were seen within the last six months.

DR. E. GRUENING, of New York, remarked that none of his cases have lived over two years after the diagnosis of retinitis albuminurica had been made out. In this class of cases, he included only those in which the typical stellate changes were seen in the maculæ of both eyes.

DR. B. E. FRYER, of Kansas City, stated that albumen is occasionally absent from the urine for a short time in these cases. In two such cases he had found albuminose during the time that albumen was wanting.

DR. DAVID WEBSTER, of New York, was confident that in rare instances these patients do recover their general health and may live indefinitely. Some years ago he examined the eyes of a clergyman and found the typical appearances of retinitis Brightii. He had been examined fifteen years previously by a competent observer, who found the same condition, and also found albumen and casts in the urine. I had the urine examined and found a slight trace of albumen.

DR. O. F. WADSWORTH, of Boston, said that where the retinitis albuminurica comes on during or immediately after pregnancy, he had seen the stellate spots in the maculæ entirely disappear. He had also seen typical stellate deposits in cerebral tumor, and in what was supposed to be meningitis, but in which there was no albuminuria.

DR. GEORGE C. HARLAN, of Philadelphia, read a paper on

THROMBOSIS AND PERI-VASCULITIS OF THE RETINAL VESSELS.

The patient was first seen June 5, 1886. There had been no trouble with the eyes until May 7th, when she noticed dimness of vision in the left eye. This increased during the day, and the following morning there was only light perception in this eye. She was examined two weeks later by a surgeon who pronounced the condition one of embolism. There was no suspicion of specific disease. There was no uterine trouble, and the heart-sounds were normal. The urine had a specific gravity of 1.009, contained some albumen, but no tube-casts were found. Examination of the eyes showed no light-perception in the left eye. The media were clear. There were hemorrhages scattered through the retina. Some were striated, extending in long streaks along the vessels. With one exception all the vessels of the retina were converted into white bands. The exception was a small artery having an independent origin. The vessels were of nearly normal size. Five or six weeks later the hemorrhages had been absorbed, but there were no other changes. In July she had a slight attack of paralysis on the left side, and examination of the urine showed some albumen and hyaline tube-casts. The rapid onset and the occurrence of blindness within a few hours seemed to exclude the possibility of disease of the vessels. Embolism would not account for the condition. The speaker suggested that the partial blindness for the first few hours was due to hemorrhage, and that the complete blindness coming on later was due to thrombosis. Thrombosis

of a whole series of vessels is, however, rare. Another possible explanation is that there had been for some time disease progressing in the outer walls of the vessels without giving rise to sufficient disturbance of vision to attract attention.

Dr. William S. Dennett, of New York, called attention to

A NEW TEST-TYPE.

A card was presented which was designed for the use of educational institutions. It contained one set of letters, and a statement of the exact distance at which these letters should be seen. The desire was expressed that this or some similar card should be placed on the wall of every school-room, in a conspicuous place, so that it should become of necessity a familiar object and a standard of measurement that would be remembered through life.

Dr. H. Derby, of Boston, read a paper on

THE POSSIBLE RETARDATION OF RETINITIS PIGMENTOSA.

In America the disease is exceedingly infrequent, and is as a rule considered incurable. In 1881 a boy, three years of age, was brought to him from Western Virginia. It was observed that toward night vision diminished. There was no history of blindness in the family. Five years later he came again, accompanied by his sister, seven years of age. Both children were night-blind and presented the evidences of retinitis pigmentosa. Under the use of the constant current there was improvement. A similar case of improvement under the use of the constant current, under the care of Dr. Standish, was reported.

The object of the paper was to invite discussion as to the use or non-use of such eyes for educational purposes, and as to the possibility of adopting measures for delaying the progress of the organic change.

A third case, that of G. W——, aged fourteen years, was described. He presented the typical appearances of retinitis pigmentosa. Non-use of the eyes and the application of the constant current was recommended. He was subsequently advised by others to use the eyes freely. In five years vision diminished from three-tenths to one-tenth. This rapid progress of the disease, it was thought, might have been aided by the use to which the eyes had been subjected.

Dr. William S. Little, of Philadelphia, had seen in one case of retinitis pigmentosa, occurring in a deaf-mute, decided improvement in vision under the use of the faradic current. The improvement continued.

Dr. L. Webster Fox, of Philadelphia, had employed the constant current with success. He had found that it was the negative pole that produces the good results, and that if there were no enlargement of the field after three applications, no improvement was to be expected.

Dr. George Strawbridge, of Philadelphia, remarked that he had tried the use of electricity in this affection thoroughly some ten years ago. He did not obtain benefit in a single instance. He recommended the occasional use of alteratives, as bichloride of mercury and iodide of potassium, looking on these cases as probably of syphilitic origin.

Dr. Samuel Theobald, of Baltimore, had seen temporary improvement from the use of phosphate of iron, quinia, and strychnia.

Dr. S. D. Risley, of Philadelphia, stated that by the hypodermatic use of strychnia he had secured improvement in the central sharpness of vision. As far as he knew, the benefit has never been permanent.

He related the case of a young man who consulted him with retinitis pigmentosa, with marked contraction of the field and asthenopia, principally due to hypermetropic astigmatism. To relieve the asthenopia a weak solution of eserine was ordered. Under its use vision decidedly improved.

Dr. O. F. Wadsworth, of Boston, referred to the case of a young man, twenty-four years of age, a divinity student, who was seen in 1873, presenting typical retinitis pigmentosa so far as the ophthalmoscopic appearances. He continued his work, and, eight years later, vision was about the same, but the visual field seemed to have decreased to a slight extent.

Dr. Edward Jackson, of Philadelphia, read a paper on

THE EQUIVALENCE OF CYLINDRICAL AND SPHERO-CYLINDRICAL LENSES.

The committee to whom was referred the consideration of the proposition with reference to the organization of a congress of American physicians and surgeons reported the following resolutions, and recommended their adoption:

Resolved, That a committee of five be appointed by this Society, and be authorized to confer with committees from other medical societies with regard to the organization of a convention or congress of such societies, and report at the next meeting of this Society.

Resolved, That it is the sense of this Society that its welfare would be put in peril by any alliance or co-operation which would interfere with its autonomy or independent meeting.

These resolutions were adopted and the following committee subsequently appointed:

Drs. O. F. Wadsworth, of Boston; C. B. Bull, of New York; George C. Harlan, of Philadelphia; Samuel Theobald, of Baltimore, and B. E. Fryer, of Kansas City.

Adjourned.

Afternoon Session.

The first paper of the afternoon session was

A REPORT OF 263 CASES OF CATARACT EXTRACTION, WITH PARTICULAR REFERENCE TO THE AFTER-TREATMENT,

by Dr. George Strawbridge, of Philadelphia.

The results had been as follows: Successful cases, 85.2 per cent.; partial successes, 8.1 per cent., and failures, 6.7 per cent. Those cases were classed as failures in which fingers could not be counted at a distance of one or two feet. In twelve cases absolute loss of the eye occurred.

After the operation the eye was thoroughly cleansed, and for the past two years a solution of boracic acid (two per cent.) had been employed. The speaker's former plan had been, after applying a bandage, to put the patients to bed in a darkened room, keeping them in bed for four to six days. Two-thirds of the cases had been treated in this way. He had found this plan exceedingly debilitating in elderly individuals, and had gradually given up this plan, so that during the past six months the patients were, practically speaking, kept in bed only twenty-four hours. The room is as light as any ordinary room. If at the end of twenty-four hours everything is doing well, the patient is allowed to move about the room. No unsatisfactory result had followed this plan.

The speaker had employed in some cases cocaine. In one case in which a four per cent. solution was used, a violent inflammation began within twenty-four hours and resulted in total loss of the eye. Subsequently he had employed it without unpleasant results. His plan is to use a two per cent. solution, drop in one drop, wait a minute and drop in a second drop, and use only two drops.

He attaches much importance to stimulation after the operation. In elderly people the use of whiskey is begun a few hours after the operation.

Dr. H. Knapp, of New York, read a paper on

CATARACT EXTRACTION WITHOUT IRIDECTOMY.

He had performed this operation six times. Three of these had made ideal recoveries, with clear, central, movable pupil. The other three had more or less posterior synechia. Vision was fair, and could be rendered excellent by a simple needling if remaining insufficient.

He follows Panas in the performance of the operation: Large section along the upper margin of the cornea; free laceration of the capsule; expulsion of the cataract and

its remnants; reduction of the iris with a probe, if it did not occur spontaneously. Before the operation the eye is fully cocainized. After the expulsion of the lens, a small quantity of an antiseptic is injected into the anterior chamber, and eserine instilled into the conjunctival sac. The speaker believed that the chief advantage of this operation lies in the possibility of keeping the wound perfectly free from foreign substances, including portions of the lens, capsule, and iris.

Dr. David Webster, of New York, read a paper on

REPORT OF FIFTY CASES OF CATARACT EXTRACTION.

The results obtained were: Successes, 82 per cent.; partial successes, 12 per cent.; failures, 6 per cent.

Aseptic precautions were used in all the operations. The best vision obtained in any case was $\frac{20}{XV}$. Dr. Webster advocated the extraction of both lenses at the same sitting in judiciously selected cases.

Dr. Webster also related the history of a case in which he had relieved the pain in a glaucoma absolutum by lacerating the infra-trochlear nerve (Badol's operation).

Dr. Henry D. Noyes, of New York, read a paper on

DEATH OF A PATIENT ON THE FIFTH DAY AFTER THE EXTRACTION OF A HARD CATARACT.

On Sunday morning the operation, which was perfectly satisfactory, was performed, and the patient suddenly died the following Friday morning. The only lesions found at the autopsy were dilatation of the heart and insufficiency of the valves of the left side. The death seems to have been due to heart-failure. Ten sections of the eyeball were exhibited. Inspection of the eye before death showed that the union was smooth and apparently perfect. What was particularly interesting was that the union appears to have taken place exclusively through the medium of the epithelial layer.

Dr. B. Joy Jeffries, of Boston, recommended that in cataract extractions cocaine be instilled into both eyes. This renders the eye quiet, and the patient can keep it open.

Dr. W. F. Mittendorf, of New York, thought that one reason bad results are obtained, was because the eye is left exposed to the air after the introduction of the cocaine solution. Recent observations show that the injurious action of cocaine is especially upon the epithelial layer, and in shutting off the supply of lymph fluid. The epithelium suffers very rapidly from lack of moisture, especially if the eye is kept open. It has been recommended to close the eye immediately after the introduction of cocaine. He employed a solution of the strength of one or two grains of cocaine to half an ounce of water.

Dr. Emil Greuning, of New York, had performed extraction without iridectomy in two cases. One was entirely successful, but in the other prolapse of the iris occurred.

Dr. H. D. Noyes, of New York, had performed extraction without iridectomy in six cases. In three of the six cases there was perfect union with a central circular pupil, and accurate vision. In one case intra-ocular hemorrhage came on twelve hours after operation. In two cases prolapse of the iris occurred. The prolapsed iris was excised, and in one case the result was entirely satisfactory. In the second case no satisfactory vision was obtained.

The speaker thought that the cases for this operation must be carefully selected. If the patient had but one eye he thought that he should operate on it with a preceding iridectomy, and not without. His belief was that a satisfactory result could be more certainly secured with iridectomy.

Dr. B. E. Fryer, of Kansas City, suggested the use of cocaine by inserting one drop every half hour until four or five drops have been used. In this way the iris becomes completely anæsthetized, and where we wish to perform iridectomy this is important.

The next paper was entitled

SOME MEDICO-LEGAL CASES,

by S. Joy Jeffries, M.D., of Boston.

Dr. Charles A. Oliver, of Philadelphia, exhibited and read a description of a new series of loose wools for the scientific detection of subnormal color-perception (color-blindness).

The following advantages are claimed for the series: That there are five tests; that the wools are loose and all of the colors of the same relative intensity; that each skein has its value expressed so that they can be employed by any intelligent layman; that accurate notings of color-changes can be made for future comparison, and proper verbal and written expression can be given; that by reason of the wools all being made of the same grade of manufacture, and all the colorings obtained from vegetable dies, no results can be gotten from the supplemental use of touch; and, finally, that a black surface is employed and no definite order of testing need be pursued.

Dr. William S. Dennett, of New York, exhibited a set of Holmgreen's worsteds, which had been made into spheres.

Adjourned until evening.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 9, 1886.

T. Mitchell Prudden, M.D., Vice-President, in the Chair.

Dr. W. Gill Wylie presented, on behalf of a candidate, a specimen of *chronic salpingitis with dilatation of the tubes and cystic ovaries.*

Dr. F. Ferguson presented mounted specimens of

FAT EMBOLI

removed from the lungs and organs of a man thirty-seven years of age, a native of Sweden and a sailor by occupation. On the 8th inst. he fell into the hold of a ship, a distance of twenty feet. He sustained a comminuted fracture of the lower third of his right thigh (not compound) and a compound comminuted fracture of the lower end of the right humerus. There were comminuted fractures of the rami of the pubes and ischium on the right side. There were no special injuries to the organs within the thorax and abdomen. There was a large quantity of blood beneath the pelvic peritoneum. The skull and brain were not injured.

He fell at 6.30 of the above date, and was admitted into New York Hospital shortly after the accident, where he died eight hours subsequently.

His pulse was irregular at times, and 75 to 80 a minute. His breathing was shallow and frequent and he suffered intense pain, especially from the injury of his right arm.

He was drowsy most of the time while in the hospital, but would readily arouse in answer to questions.

The lungs were anæmic; numerous sections of organs showed areas of capillaries filled with fat.

One of the sections was stained with osmic acid, the fat was seen colored black; the other section was mounted in three-fourths of one per cent. chloride of sodium solution.

PYO- AND HÆMATO-SALPINX.

Dr. W. Gill Wylie presented a series of specimens. One year ago he had reported to the Society twenty-five cases, in which he had operated for the removal of diseased tubes and ovaries. Since that time he had operated in twenty-eight cases, and in all except two recovery took place. The two fatal cases were complicated, one by acute abscess at the end of the tube and in the tissues around it, and the other by hæmatoma of the ovary, the contents of which were similar to retained menstrual

fluid, and so tarry in consistence that it was impossible to wash it away from the peritoneum, the sac having ruptured while being removed. Just how much this had to do with the fatal septicæmia which followed the operation Dr. Wylie was unable to say.

In more than one-half of the cases there was distinct pyo-salpinx; in the others the tubes contained a coffee-colored fluid; the ends of the tubes were closed and the ovaries were cystic, the cysts varying in size from that of a pea to that of an orange. Occasionally cystic degeneration of the ovaries was found without closure of the tubes, but usually in those cases it was associated with small imperfectly developed organs of generation. There was one specimen of *hæmato-salpinx*, a rare occurrence. Nearly all the cases gave a history of gonorrhœa. One specimen illustrated *fibroid degeneration of the ovary*, an exceedingly rare condition.

Dr. Amidon asked concerning the result of the operation in the cases of hystero-epilepsy.

Dr. Wylie said he had seen some of the cases operated upon a year ago, and in one patient no benefit had been afforded; but with that exception the results had been very satisfactory, more so, certainly, than he had expected. He recalled one case in which at the end of eight or nine months the patient regarded herself as entirely cured. In two cases the progress toward a cure was slow, until he dilated the uterus thoroughly, when the symptoms were removed entirely. Although some of the patients had had nervous symptoms for a few months after the operation, he had yet to see the patient, when the operation had been performed early, who had not been cured. In those cases in which the reflex attacks were associated more or less with menstruation or disorders of the internal generative organs the patients certainly were curable.

Dr. Putnam-Jacobi asked Dr. Wylie if he would remove the ovaries when there was no objective sign of disease of those organs.

Dr. Wylie said that he would not do so in very many cases. But if a young girl, who had to work for her living, was so afflicted that it became necessary for her to either be in her bed or to enter a hospital a certain portion of every month, he would not hesitate to open the abdomen and look at the ovaries, but if they were of normal size and showed no abnormal cyst, he would not remove them.

Dr. Putnam-Jacobi thought it worthy of mention, that in Charcot's latest work on hystero-epilepsy there was an entire absence of reference to uterine, ovarian, or any pelvic disease as causes of this nervous affection.

Dr. E. M. Cushier presented specimens of

MULTIPLE CARCINOMA

removed from the body of a woman twenty-six years of age, married, and the mother of three children, the youngest being one year of age. Her menses appeared at the age of fifteen; had always been irregular, painless, and she had menstruated irregularly since the birth of the last child. Three months ago the patient noticed a lump in the left side of her abdomen, which occasioned much pain. On entering the infirmary she was pale, cachectic, and feeble, and the abdominal tumor reached three fingers' breadth above the pubis, and to the left side. The enlargement was very sensitive, both to external pressure and pelvic examination. The position of the uterus could not be made out on account of the pain given by manipulation. Dr. Cushier decided that an exploratory incision was not admissible. The patient remained in the infirmary, failed gradually, complained of pain in the abdomen, and occasionally of stitching pains in the chest.

On May 10th she had a violent convulsion, which lasted fifteen minutes, and from which she passed into a half-unconscious condition. No further convulsion occurred, and the patient was merely apathetic.

On May 15th external strabismus of the left eye was noticed, and on the following day the pupil of the left eye was widely dilated, while that of the right eye was normal.

At no time was there any paralysis of either the face or the body. The patient remained semi-comatose, passed urine involuntarily, and died on May 17th.

The autopsy revealed a tumor closely adherent to the peritoneum and all the pelvic tissues, dark in color, parts of it soft, and the softened portions contained hemorrhagic spots. The uterus could be felt below and in front. The right fallopian tube remained intact, but the right ovary had undergone degeneration, and the mass had projected over to the left side, causing it to appear as if it was an enlargement of the left ovary. The left ovary was normal. A large nodule was found in the lower border of the liver. The kidneys contained two small nodules. The lungs were studded with nodules, varying in size, the largest being nearly three-fourths of an inch in diameter. The bronchial glands were enlarged, and these during life gave rise to marked hoarseness. The heart was normal. The brain was examined by Dr. Putnam-Jacobi, who would present the specimen.

Microscopical examination of the new growth in the ovary, the liver, the kidneys, and the lungs had been made, and the diagnosis was *medullary carcinoma*.

Dr. Putnam-Jacobi presented the brain, which contained a tumor that in its fresh state presented the appearance of carcinoma. It was situated in the posterior part of the second and third temporal convolutions of the left hemisphere, occupying nearly one-half of the second and about one-third of the third. The surrounding tissue was considerably œdematous. There was also a small nodule situated in the cuneus of the same hemisphere, in very nearly the locality which has recently been demonstrated to be the visual centre. There was another nodule at the posterior limit of the occipital gyrus.

Dr. Putnam-Jacobi regarded it as peculiar that the patient presented no cerebral symptoms until a few days before death, and that the convulsion was apparently not due to the tumor, but to another lesion occupying the opposite hemisphere, and consisting of a hemorrhage into the posterior gyrus, and encroaching upon the caudate nucleus of the right side of the brain.

The tumor occupied the region which has been said to give rise to blindness, and yet nothing of that kind was present during life. A remarkable circumstance was its latency, although the temporal lobe was where such tumors were most frequently found.

The meninges were normal.

Dr. Amidon asked if the cerebral tumor was vascular at the time the autopsy was made?

Dr. Putnam-Jacobi replied that it was excessively so.

Dr. Amidon remarked that a vascular tumor in this locality, one which might during life exert pressure, could have given rise to word-deafness, and he would ask if any hesitancy in speech or in answering questions was noticed, or any incoherence?

Dr. Cushier said that nothing of this kind was noticed. The patient merely was stupid, but answered readily.

Dr. Amidon said his faith in localization was so great that he should be inclined to think that something of the stupidity was word-deafness.

Dr. Ferguson asked how frequently secondary carcinomatous deposits were found in the brain.

Dr. Putnam-Jacobi thought that primary carcinoma of the brain was more frequent than secondary.

Dr. Ferguson said that he had seen only one case of primary carcinoma of the brain, and in that instance there were about a dozen small tumors, varying in size from a pin's head to a small pea, and they presented the ordinary features of the primary growth.

The specimen was referred to the Committee on Microscopy.

Dr. E. N. Liell presented a

DERMOID CYST OF THE OVARY

taken from a woman, sixty-nine years of age, married, the mother of three children, and whose menopause occurred twenty years ago. She was perfectly well up to last March. At that time she noticed a gradual enlargement of her abdomen, with more or less of pain, increasing in severity in proportion to the increase in the size of abdomen, but thinking that it was nothing except tympanites, she did not consult a physician until one month ago, by whom she was referred to Dr. H. Marion Sims. At that time there was some œdema of the lower extremities. There was also more or less nausea and dyspnœa, produced by pressure of the tumor. All these symptoms gradually increased in severity up to the date of the operation, June 9th, which was performed by Dr. Sims, Dr. Liell assisting. The diagnosis was ovarian cyst, either dermoid or multilocular. The operation demonstrated it to be a dermoid tumor, weighing nearly seventy pounds, consisting of a gelatinous bloody fluid and a solid mass, with more or less of sloughing tissue and several large pieces of bone. The operation having been performed only three hours previously, the specimen had not been examined thoroughly for hair and teeth.

The pedicle was ligated with rubber, and according to the extra-peritoneal method. The specimen was interesting, especially with reference to its contents and the rapidity of its growth.

At seven o'clock the patient had rallied very well, her temperature being normal, and pulse 94.

The specimen was referred to the Committee on Microscopy.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ABSCESS IN THE URETHRO-VAGINAL SEPTUM—THE UTERINE BRUIT—THE JUBILEE FESTIVAL OF THE BRITISH MEDICAL BENEVOLENT FUND—HOSPITAL SUNDAY AND SATURDAY—THE MEDICAL MANAGEMENT OF PUBLIC SCHOOLS—THE POSTAL MICROSCOPICAL SOCIETY.

London, July 20, 1886.

At the last meeting of the Obstetrical Society Dr. Herman, Obstetric Physician to the London Hospital, narrated the particulars of a case of chronic abscess of the female urethra which had come under his observation. The patient was forty-seven years of age and had suffered from dysuria, dyspareunia, and irritability of the bladder, the symptoms gradually increasing in severity. There was a tender swelling between the urethra and the vagina which burst and discharged pus into the urethra. The cavity was found to be about half the size of a walnut, and it soon contracted and healed after cauterization of its interior with nitrate of silver. Dr. Herman remarked that such an abscess might be either due to chronic congestion of the urethra or to suppuration of a cyst. He did not think his case was an example of the latter. The rarity of the affection was remarked on, Dr. Herman stating that he had only been able to find three cases on record. Dr. Matthews Duncan said he had seen many abscesses in the recto-vaginal septum, but remembered none in the urethro-vaginal septum. Dr. Gervis said he could only recall one case, and Mr. Knowsley Thornton said he had only seen a few cases of the kind.

Dr. Champneys, Obstetric Physician to St. George's Hospital, then read a paper embodying the results of a series of observations made by himself on the uterine, or, as it is sometimes termed, the placental *bruit* or *souffle*. He had heard it on the left side in thirty-three cases; on the right side in one. In five cases he had heard it after the expulsion of the placenta, but in these cases its point of greatest intensity had sunk down after delivery. A pulsating artery was felt in the vagina in five cases, but pressure on it affected the *bruit* in one case only. The author considered that the preponderance of left- over right-sided *bruits* confirmed the view that the *bruit* was produced in the arteries as they reached the uterus, or soon after, as, owing to the twisting of the uterus so that its anterior surface looked toward the right side, the left cornu was anterior to the right cornu.

Dr. Herman remarked that the variations in loudness of the murmur were of much importance in its identification. There was no kind of abdominal enlargement in which a murmur, having rhythmical variations in loudness, was heard, except that produced by uterine tumors. The presence of such a murmur, therefore, showed that the tumor was uterine, but did not give any further information as to its nature.

Dr. Amand Routh, Assistant Obstetric Physician to Charing Cross Hospital, referred to a case in which, by means of vaginal stethoscopy, the uterine *souffle* was proved to exist two or three weeks after the presumed death of the fœtus, which (labor having been induced for uncontrollable vomiting) was found to be mummified. In this case the *souffle* was inaudible over the abdomen, and Dr. A. Routh remarked that he had frequently heard the *souffle* through the vagina, by vaginal stethoscopy over the cervix uteri, when it was inaudible over the abdomen.

The Hospital Sunday Fund has produced about thirty-five thousand pounds. The jubilee festival of the British Medical Benevolent Fund has produced £3,500. Yet the former appealed for contributions to the population at large, and the latter only to a profession of some twenty-five thousand members. The result shows the truth of the old adage, that it is safer to apply to anyone for a favor who has previously granted you one than to a person who is indebted to you for previous favors. The medical profession already do gratuitous medical work in hospitals, dispensaries, and private practice to the total value of many thousand pounds annually, and yet, when appealed to, they can raise a very handsome sum for distribution among unfortunate brother-practitioners.

It would be putting a very moderate estimate upon the value of professional services to suggest that every medical man gives his professional services gratuitously to the value of two pounds annually. Yet, if this be accepted as a fair estimate, the entire profession does work for nothing to the extent of fifty thousand pounds a year, a sum which I very much doubt will be exceeded by the Hospital Sunday and Saturday Funds of this year put together. Yet some medical men are called grasping!

An animated correspondence has been recently going on in *The Times* respecting an outbreak of infectious disease at a public school. Amidst the wordy strife which has been carried on, it is possible to pick out certain very unpleasant facts. A schoolboy having gone home for a few days' holiday, informed his father that there had been cases of diphtheria in the school. His father had been informed of the occurrence of cases of measles in the school, but on finding that diphtheria was also prevalent he naturally felt alarmed. On the return of the boy to school he found that a death from diphtheria had occurred, and his father, on learning this, removed him from the school, although warned that if he did so he could not again send him to the school. What defence the head-master may be able to make to the charge brought against him remains to be seen. It may be noted that the medical attendant to the school is the son of the head-master, and the latter was, therefore, presumably kept informed of medical matters affecting the school. This renders the more inexcusable the deplorable neglect which seems to have occurred.

A very unostentatious, but withal very useful, little society is the Postal Microscopical Society. This has now been in working order for some years, and its work-

ing is intimately known to me. Its members send slides round for mutual studies at fortnightly intervals. A note-book accompanies the box of slides, and very full notes are frequently made on good specimens. The book and slide-box travel by Parcel Post for the small sum of threepence. A medical section exists, in which only anatomical and pathological specimens are circulated. The extent of the operations of the Society may be gauged when I mention that it has members beyond the United Kingdom and, out of an annual subscription of only ten shillings, supports a quarterly journal.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE FORMATION OF CRYSTALS IN THE ANIMAL ORGANISM —THE ACTION OF PELLETIERINE ON THE MOTOR NERVES OF THE EYE—THE TREATMENT OF DISEASES BY OPERATIVE MEASURES—RADICAL PROCEDURES FOR TRIVIAL AFFECTIONS—ONE UTERUS AND ONE KIDNEY LESS, AND TWO LUCKY PATIENTS.

PARIS, July 23, 1886.

DR. GALIPPE stated, at a recent meeting of the Biological Society of Paris, that the existing theories for explaining the formation of crystals in the animal organism are not satisfactory, though he believes that micro-organisms have some influence on the formation of these salts. From researches made with dental tartar, Dr. Galippe has discovered that it always contains micro-organisms which, when sown and cultivated, are constantly attended with identical results. He concludes that probably these micro-organisms are factors in the formation of salivary calculi. In the centre of these calculi there is always some foreign body, such as a hair or a fish-bone. He does not believe that the foreign body is a centre of crystallization, but that micro-organisms are carried along with it into the salivary canal; there, by chemical action, they become agents in the formation of a deposit of mineral salt; hence the necessity for rinsing the mouth frequently, and particularly after meals, with an alkaline solution. Dr. Galippe also met with micro-organisms in biliary and vesical calculi.

Dr. Galezowski lately read a paper before the Paris Academy of Medicine on the action of pelletierine on the motor nerves of the eye. His researches were based on the ocular disturbance which occurs in subjects who absorb this substance, and who are affected with diplopia. The observation of this fact has induced Dr. Galezowski to prescribe pelletierine in cases of paralysis of the third and sixth pairs of nerves. Iodide of potassium and blisters failed where pelletierine cured. The preparation used was the syrup of pelletierine, in the proportion of one gramme to one hundred and twenty grammes of syrup. From three to six doses of a tablespoonful each were administered daily. But this substance being excessively dear, Dr. Galezowski proposes to meet this difficulty by administering it in subcutaneous injections.

The growing tendency in the profession to treat all diseases by surgical or operative measures is becoming more and more evident. In some cases they are no doubt justifiable, but in others they are very questionable. At the meeting of the Academy of Medicine last week, Dr. Gustave Richelot, son of the celebrated physician of that name, made a communication on a case of vaginal hysterectomy which he had performed on a young woman for the cure of retroversion of the uterus. Dr. Richelot had already more than once performed this operation for the cure of primary cancer of the body and neck of the womb, but whether he is justified in resorting to such a severe or radical measure in the case under notice time alone will tell. The case was that of a young woman, aged twenty-six, who was admitted into the Saint-Antoine Hospital about the beginning of April last. She was extremely anæmiated and emaciated, and her face was bony and of a waxy complexion. She suffered intense and continual pain in the pelvic region, which was aggravated at each menstrual period and attended with great difficulty in walking. On examination the uterus, which was slightly increased in size, was found in retroflexion, the body occupying the posterior vaginal cul-de-sac. The neck was in its normal position, and presented no lesions of any importance. The organ, in its *ensemble*, was sufficiently mobile, and nothing indicated that it was fixed by adhesions. With the author, it is difficult to understand how a simple uterine displacement, without any notable hypertrophy, without fibroma, without evident compression of the pelvic organs, could bring about such functional troubles and a general state of health so lamentable. And yet, without further consideration, Dr. Richelot decided upon removing the entire uterus, which radical operation he thought was necessary for the safety of the patient's life, as every attempt at permanently reducing the retroflexion had failed. The operation was performed on April 28th, and on June 3d the patient was reported as completely cured. The operation was attended with little or no hemorrhage, and no complication followed. Dr. Richelot attributed this remarkable success of the operation to the employment of a solution of the bichloride of mercury (1 to 1,000), with which he irrigated the vagina before and after the operation, and to the employment of a special kind of forceps, eight in number, applying continual pressure, and which, being of sufficient length, he left suspended from the wounded arteries for forty-eight hours.

After Dr. Richelot, Dr. Polaillon mounted the tribune and read a paper on an operation he had performed which was equally as radical as the preceding one, and under almost similar circumstances—that is, as far as the justifiableness or otherwise of the operation was concerned. The operation was nephrectomy, for the removal of a floating and painful kidney in a young woman who had been the subject of this infirmity for two years. As the author stated, the indication for removing a floating kidney is extremely rare, as the mobility of the kidney has ordinarily no influence on the health. It merely constitutes an inconveniehce or annoyance more or less great, which may be remedied by a belt or other appropriate apparatus; and if the patient leads a sedentary life, he or she might reach the term of a natural career without any suffering. This immunity is not always enjoyed by the subjects of floating kidneys, and sometimes they suffer so much pain that they are obliged to lay up. Surgical intervention is indicated only when the pains are violent and rebellious to medical and orthopedic measures, and if the health is much affected, as was the case with the patient above referred to. After five months' observation in his own ward at La Pitié Hospital, Dr. Polaillon, finding no amendment in the state of health of the patient, decided upon removing the offending organ, which he did about two months ago. It was the right kidney, which was so mobile that it could be felt in almost every part of the abdomen, and could be seized between the fingers. Believing that he had to do with a kidney with a long pedicle, the operator practised a laparotomy on the median line, when he discovered that the organ moved in the loose connective tissue in the retro-peritoneal space. It was then necessary, in order to bring the kidney to view, to draw aside a portion of the small intestine. No untoward symptom supervened, and the patient was cured in a fortnight.

ACUTE POISONING FROM SARDINES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: A family living near this city purchased a box of sardines. A young lady of the family ate one or two on Sunday evening, and all through that night suffered from violent nausea, vomiting, colic, and finally diarrhœa. The cause of the trouble was not suspected, and two days later seven members of the family, including two servants and a child two and one-half years of age, ate from the

same box. Two or three hours after this they began to suffer from nausea and vomiting, followed in some cases by profuse painless watery discharges. One of the servants, a woman aged forty, was brought into a condition of collapse, and for a time there were even fears of her life. The little child only took one very small taste. She suffered, nevertheless, from nausea and vomiting for a few hours only. The effect of the poisoning was very prostrating, it being nearly a week before all had recovered strength. Very little actual pain was felt.

The sardines tasted well, and showed no signs of decomposition. They were supposed to be of the best quality.

I have had no opportunity of having the remaining fish examined, and write in hopes that some of your readers can tell me what was the matter. Was it ptomaines or tin? Yours, M. C.

New York City, July 25, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 25 to July 31, 1886.

Brown, Joseph B., Colonel and Surgeon. Retired from active service, July 26, 1886. S. O. 171, A. G. O., July 26, 1886.

Gibson, J. R., Major and Surgeon. Ordered from Department of the East to Department of Missouri on expiration of leave of absence granted in S. O. 158 c. s., A. G. O. S. O. 168, A. G. O., July 22, 1886.

Bentley, Edwin, Major and Surgeon. Ordered for duty as Post Surgeon at Fort Davis, Tex. S. O. 92, Department of Texas, July 22, 1886.

Taylor, M. K., Major and Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 77, Department of Missouri, July 24, 1886.

Middleton, Passmore, Major and Surgeon. Ordered to Department of the East from Department of Missouri. S. O. 168, A. G. O., July 22, 1886.

Girard, Joseph B., Captain and Assistant Surgeon. Granted leave of absence for three months, with permission to go beyond sea. S. O. 170, A. G. O., July 24, 1886.

Robinson, Samuel Q., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon at Fort Brown, Tex. S. O. 92, Department of Texas, July 22, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended July 31, 1886.

Lumsden, G. P., Passed Assistant Surgeon. Ordered to duty at Marine Barracks, Washington, D. C., for the month of August.

Cordeiro, F. J. B., Assistant Surgeon. Ordered to Receiving Ship Minnesota.

Laparotomy for Acute Suppurative Peritonitis.—At a meeting of the Zurich Medical Society, Professor Kroenlein reported three cases of laparotomy for acute diffuse purulent peritonitis. One of his patients, a lad aged seventeen, with perforation of the vermiform appendix, died from collapse two days after the operation. Another, a man aged sixty-one, with perforation of the small bowel and extreme collapse, survived only a few hours. But the third patient, aged eighteen, made a satisfactory recovery, though his state at the time of the operation was extremely grave.—*Brit. Med. Journ.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 31, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	15	5
Scarlet fever	15	9
Cerebro-spinal meningitis	2	2
Measles	60	11
Diphtheria	60	25
Small-pox	0	0

Ice-cream Poisoning.—Dr. J. W. Kales, of Franklinville, N. Y., writes: "I have read with care your editorial and the letter of Dr. Morrow upon the above subject. Some four years ago I had considerable experience with the so-called victims of poisoned ice-cream and the lengthy legal investigation which followed. At that time I carefully searched all the available literature bearing upon the subject, and since have carefully watched the numerous reports of wholesale poisoning that have appeared in the press. The symptoms—acute gastro-intestinal irritation—are always the same. That there are in every hamlet men who will wilfully mingle poison in food I do not believe, nor do I believe that the extract is at fault. If vanillism is the cause, why do we not have cases caused by drinking soda-water? For vanilla is a popular flavor. Why do we not have cases at our fashionable hotels where cream is served? I do not wish to detract from any man's labors, but I do believe that the cause, or rather causes, of the poisoning can be attributed, not to poor gelatine, vanillism, coumarin, or tyrotoxcin, but to the manner in which the cream is partaken. Every law of digestion is violated at the so-called 'ice-cream' festival. Every fellow takes particular delight in gorging himself and his 'best girl,' not only with ice-cream, cake, candy, etc., but with every variety of indigestible substance. This process goes on for two or more hours, when outraged nature comes to the rescue and the indigestible matter is expelled with all the symptoms of acute gastro-intestinal irritation. It only excites the public because so large a company are sick, or poisoned if you wish, at the same time. Have we not seen isolated cases, presenting exactly the same symptoms, caused by eating oysters and other food and drinking ice-water? I have. What are the causes of cholera morbus, summer diarrhœa, etc.? Are they other than those of ice-cream poisoning? I say that they are the same. I have arrived at this conclusion after some experience and much study. If any person can convince me of error I trust that he will produce the proof. I am open to conviction."

A Cure for Toothache from Dental Caries.—Dr. V. Gsell-Feltz, of St. Gallen, warmly recommends, in toothache from dental caries, the application of cotton-wool soaked in an oily fluid obtained by melting together five grammes of camphor, five grammes of chloral, and one gramme of cocaine. Relief is complete and lasting.

In Hæmorrhoidal Tumors five drops of a ten per cent. solution of phenic acid injected into the swelled veins almost immediately withers it up. Dr. Menière employs the following formula, which he esteems superior to the simple solution, as the pain, which otherwise is often severe, is greatly lessened: Glycerine, two drachms and a half; phenic acid, twenty drops; morphia, five grains.

What can't be cured must be treated at the usual rates.

ANT VAGINITIS.—To the Obstetrical Society of New York, Dr. Gillette reported the case of a patient who applied to him complaining of irritation of the vulva and vagina, accompanied by profuse leucorrhœa. On examination the vulvo-vaginal mucous membrane was found to be much inflamed and bathed in pus. Vaginal injections were ordered, but the patient objected to them, saying that they always made her worse. A few days later she reported again, and said that she had discovered the cause of her trouble, viz.: Red ants had taken up their abode in her fountain-syringe, and every time she used the syringe the ants were poured into the vagina. Their bites undoubtedly caused the inflammation. He related the case merely to offer a new cause of vaginitis.

PAPER SPOONS FOR EYE-DROPS.—Dr. F. A. A. Smith writes to the *British Medical Journal:* "Most instruments used for placing drops on the eye have their disadvantages. They cost money; the hairs from brushes may be left behind, quills and glass-droppers are dangerous in inexperienced hands, bits of rag are dirty, etc. I have been for many years in the habit of directing patients to make their own droppers, by simply cutting a piece of clean paper in the form of a little spoon. These spoons are made in a few seconds, and are costless. A clean spoon may be used every time that drops are used. Being made of soft paper, no harm can be done to the eye."

COMPLIMENTARY TO WASHINGTON DOCTORS.—The Washington correspondent of a Western daily says: "Congressmen get queer letters sometimes. The other day a Western member showed me the following: 'Dear Sir: My children have been afflicted with the scabs all winter, and the medicine given them by the doctor here does not seem to do any good. I see by the papers that there are some very fine doctors in Washington connected with the Government, and if it does not cost too much I wish you would ask them what is good for the scabs and write me by return mail.'"

THE INTERNATIONAL MEDICAL CONGRESS.—A well-known American physician writes to us from Berlin, under date of June 30th, that he has lately come in contact with prominent members of the profession in that city, Bremen, Hamburg, Dresden, Munich, Vienna, and Breslau, and that everywhere the leading questions were: "What about the Congress of 1887? Will it be held? Will it be a success? Will you be there? How much reduction will there be in the passage rates? Is it to be managed by homœopaths? Have the dissensions which threatened to wreck the Congress been adjusted? Whom shall we meet whom we know?" etc. To these queries he felt it his duty to answer: "The Congress will surely be held. Whether it will be a success cannot now be foretold. I shall not be there. So far as I know there will be no reduction in fares to America. The homœopaths have nothing whatever to do with the Congress. The dissensions have not been adjusted in any sense whatever. You will be likely to meet chiefly men whom you do not know by name or fame, since the majority of the best-known men in the United States have withdrawn from the Congress because they do not approve of the way in which it is managed." "With but few exceptions," he adds, "I found very little inclination to incur the trouble and expense of a trip across under such discouraging auspices. My replies only corroborated previous impressions."—*New York Medical Journal.*

TRACHEOTOMY FOR HÆMOPTYSIS has, fortunately perhaps, never been performed but twice. The second and last case was that of a woman, thirty-four years of age, brought to Professor Wyss' clinic at Zurich with acute anæmia, caused by profuse hæmoptysis, and in whom, about four weeks later, within ten minutes after a fresh severe hemorrhage, tracheotomy was performed. About fifty cubic centimetres of arterial blood were then aspirated (with a catheter) through the wound. The procedure at once relieved the urgent inspiratory dyspnœa and deep cyanosis, and removed the unconscious state (all of which symptoms were ascribed solely to the presence of considerable quantities of blood in the bronchi and trachea). Four days later, however, the woman died from purulent mediastinitis, starting from the tracheal wound.

IODOL IN OCULAR DISEASES.—At the Société de Thérapeutique, M. Paul read a note on iodol in reference to ocular diseases. This body, which contains eighty-five per cent. of iodine, gave him great satisfaction in cases of chronic blepharitis and conjunctivitis. He uses the following formula, and considers it superior to yellow precipitate: Vaseline, iodol, āā 3 iij.

THE TREATMENT OF MASTITIS BY REST AND COMPRESSION.—We have received a letter addressed by Dr. Wm. H. Doughty, of Augusta, Ga., to Dr. J. A. Post, of Lansing, Mich., and sent by request of the latter gentleman to THE RECORD for publication. The writer, referring to Dr. Post's letter published in these columns under date of November 21, 1885, says: "I have just read your defence of the claim of Dr. Ranney, of your city, to priority and originality in the treatment of mastitis by rest and compression, and by the use of the many-tailed bandage. Allow me to throw a little light on the subject of this disputed claim. You trace Dr. Ranney's claim as far back as 1866. This practice has been taught and pursued in this locality for thirty or more years. In 1853 and 1854, when in attendance upon the lectures at the Medical College of Georgia, I was taught by the distinguished Professor of Surgery, the late L. A. Dugas, M.D., LL.D., to adopt and prefer this method of treatment, and, with few exceptions, have employed it ever since. I presume he was the originator of this simple and effective mode of managing this very serious trouble to lying-in women, and do not doubt that a careful examination of the files of the *Southern Medical and Surgical Journal*, then one of the most influential journals of the South, published in this city, and of which he was for many years one of its most distinguished editors, would reveal an editorial or communication on the subject. He not only recommended the many-tailed bandage as the best and simplest, but, almost in the words of Dr. Ranney, advised it 'for the treatment of congested and inflamed breasts, and for the prevention of the secretion of milk when, on account of a still-birth, or death of the child after delivery, or for any other reason, it became necessary to diminish the augmented activity of the circulation, the tendency to tumefaction, inflammation, and its results, or to arrest the secretion of milk in the mammæ.' More than this, he specified its negative advantages in retiring the inflamed organ from sight and officious manipulation and filthy applications of every kind by patient or nurse, as of no little importance. This mode of treatment is so familiar here as no longer to possess a feature of novelty; indeed, it is rather a matter of surprise that a claim to its discovery should be made in these latter years by any physician from any quarter of the country." . . .

A SIMPLE METHOD OF PRESERVING DEAD BODIES.—Dr. M. Kennedy, of Bartow, Fla., writes for information as to the best, simplest, and most ready method of preserving dead bodies. He says: "Many who die in this State are from remote sections of the country, and the relatives and friends are anxious that the bodies should be so prepared, embalmed, as to preserve them to be viewed at their former homes. In most instances the medical attendant is called on to perform this operation. The meagre information to be had on the subject, and the bungling manner in which I have seen the attempt made, has induced me to call on the profession, through THE RECORD, for more light concerning the matter." The writer also asks what might be considered a reasonable fee for such services.

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Original Articles.

MEDICINE IN THE UNITED STATES, AND ITS RELATIONS TO CO-OPERATIVE INVESTIGATION.[1]

BY JOHN S. BILLINGS, M.D., LL.D. EDIN.,
SURGEON U.S.A.

MR. PRESIDENT, AND GENTLEMEN OF THE BRITISH MEDICAL ASSOCIATION: You all know that the representative of the American medical profession first selected by your Executive Committee to deliver the address in medicine to-day, was the late Dr. Austin Flint, Sr., of New York, whose death last March is, therefore, a great and direct loss to you as well as to America. Every English physician knows Dr. Flint by reputation and through his writings; but only those few of you who were so fortunate as to know him personally can fully appreciate the magnitude of the loss which the medical profession has sustained in his death.

This is not the time and place to attempt to pronounce a fitting eulogium upon him and his work, and I shall, therefore, only say that my deep personal sorrow for his removal is mingled with sympathy for the members of this Association, who have been thus deprived of the pleasure of hearing him state in person some of the results of his long and wide experience. The loss is not a total one, it is true, since he had, fortunately, completed his address on "The Medicine of the Future," which has been published, and has, no doubt, been read by all of you; but in this case the printed page is by no means a satisfactory substitute for the spoken word.

In accepting the request with which I have been honored by your Council, that I should attempt to take his vacant place on this occasion, it is with a full understanding of my inability to fill it that I stand before you. Nevertheless, when your President sent me this invitation, and urged its acceptance on the ground that I could thus at least show my appreciation of the brotherly feeling toward the American medical profession which prompted those who gave it, it was not proper or possible to decline or to make excuse, and I can, therefore, only return thanks for the honor, and ask that under the circumstances you will be lenient in judgment upon what I shall present to you.

The request came at a time when I was hard pressed by official duties, and had neither leisure nor opportunity to undertake any special research; hence, to avoid violating one of my favorite Scotch maxims, viz., "That which you do not know, tell that not to any one," it was necessary to select some subject to which I had already given consideration, and which at the same time would probably be of interest to English physicians.

Reflection on these restrictions soon brought the field of selection into narrow limits, almost into "a small intercept of space of one dimension," as a mathematician would say.

What is the significance of this invitation extended for the first time to a physician of another country, and that country the United States, to come to this annual gathering of the medical men of Great Britain and give the address in medicine?

Does it not mean recognition of the unity of medicine, of the utility of co-operation, of the fact that we have common interests, and that the time has come when it is desirable to hear from the outlying younger branch of the family with a view to mutual pleasure and profit in the future? So it seems to me; and I propose, therefore, to call your attention briefly to some points relating to the present condition and future prospects of medicine in the United States, and to the direction in which you may reasonably hope and expect from that country, in the future, the most useful co-operation in the improvement of medical science and art. I believe that these must be matters of interest you, and that I can perhaps make clear certain peculiarities which do not seem to be as generally understood on this side of the Atlantic as it is desirable that they should be to insure sound judgment upon some of the results observed.

In the first place, permit me to call your attention to the fact that it is hardly possible to make any statements with regard to medicine in, or the medical profession of, the United States as a whole, which shall be definite, and at the same time distinctive; that is, which will not apply almost equally well to medicine and the medical profession in other countries. This is due to the fact that there are great differences in the organization of the profession in different parts of America, so that what is true of one State would not be true of another; what is required as to fitness or qualification to practise in one place is not required in another; and the country covers so many parallels of latitude and meridians of longitude, making the conditions of life so diverse, and producing such differences in the prevailing diseases, that a man who is fairly qualified to practise in one section may be poorly fitted to treat the endemic diseases of another.

As in painting a picture it is best to locate and define the shadows first, and deal with the lights afterward, let us begin by considering some of the things that American physicians complain about; in other words, some of their supposed grievances. One of these is that the profession is overcrowded; that there are too many doctors, both *in esse* and *in posse*, and that this is due to too low a standard of education, and to the want of legal restrictions as to the qualifications which shall give a man the right to practise. The feelings of some of our physicians on this subject are in full accord with those of the good old New England deacon who told the village scapegrace seeking admission that "he thought the church was about full."

Now what is the number and distribution of medical men in America? Statistics gathered in 1883,[1] showed that in the United States and Canada there were 90,410 persons calling themselves physicians, being in the proportion of 1 to every 600 of population. In Canada alone there were 3,487 physicians, or 1 to 1,112 of population. If we take the figures of our last census, of 1880, the proportion of physicians reported is 1 to 589 of population, or 17 per 10,000. In England and Wales, by the census of 1881, the proportion of physicians is only 5.8 per 10,000, but these figures are not properly comparable with those of the United States, because they do not include unregistered persons. If the same classes were included that are counted in the United States report, I presume that the proportion would be about 9 per 10,000, or a little more than half that in the United States.

[1] The Annual Address in Medicine, delivered before the British Medical Association, Wednesday, August 11, 1886.

[1] Illinois State Board of Health Report, 1884.

In the United States the proportion to the population of those who call themselves physicians varies greatly in different localities; thus in Colorado there are 29.3; in Indiana, 25.2; in Oregon, 24.3; and in Arkansas, 23.5 per 10,000; while in New Mexico there are only 6.6; in South Carolina, 9.2; and in North Carolina, 9.7 per 10,000.[1]

It is not so easy to give satisfactory reasons for these differences; we can only say that they do not depend, to any great extent, upon local legislation. The proportion of physicians is generally lowest in the Southern States lying east of the Mississippi, and highest in those regions where immigration has recently been active. If we compare, by localities, the proportion of physicians to the population with that of clergymen and lawyers, we find some curious differences. It seems that the lawyers of the United States number 12.7, while in England and Wales they are 6.6 per 10,000, but that on the other hand the clergymen are 14.6 in England and 12.8 in the United States per 10,000 of population. In many instances it seems that where the lawyers are most numerous the supply of clergymen is smallest. I believe that a fair proportion of physicians to population is about 1 per 1,000, which is not far from the actual proportion in England, while the true proportion of practising physicians in the United States is about 1 in 750. We must admit, then, that there is at all events no scarcity of physicians in the United States, and, as we have over eighty medical schools at work, besides a fair proportion of medical immigrants, there is no immediate danger of any interruption to the supply.

Let us now consider the second head of the complaint, viz., that the standard of education is too low. There is ground for this, considered with reference to some localities, but not for others. I said a moment ago that a man might be fairly qualified for practice in one part of the country and yet find himself at a loss in another. This needs a little explanation, which I can, perhaps, give most easily in connection with a map of the United States, which I here show you. This map which was prepared for a very different purpose, indicates by different shades of color the relative proportion of deaths reported as due to malarial disease to the total number of deaths in different parts of the country for the census year 1879–80. You will note how comparatively light the tint is in the North and Northeast, and how dark the shades become in the South and in the Valley of the Mississippi, thus indicating the great differences which exist as to the prevalence and deadly effects of the malarial poison in different sections of the country. It is in some of these low bottom lands and swampy districts that we meet with cases of congestive chills and of malarial hæmaturia, cases in which the patient has been described as being "a mere appendage to a huge malarial entity, an incident of a miasmatic cataclysm." Furthermore, this strip of land bordering on the Gulf-coast is in the yellow fever zone, and has, heretofore, been repeatedly desolated by this pestilence.

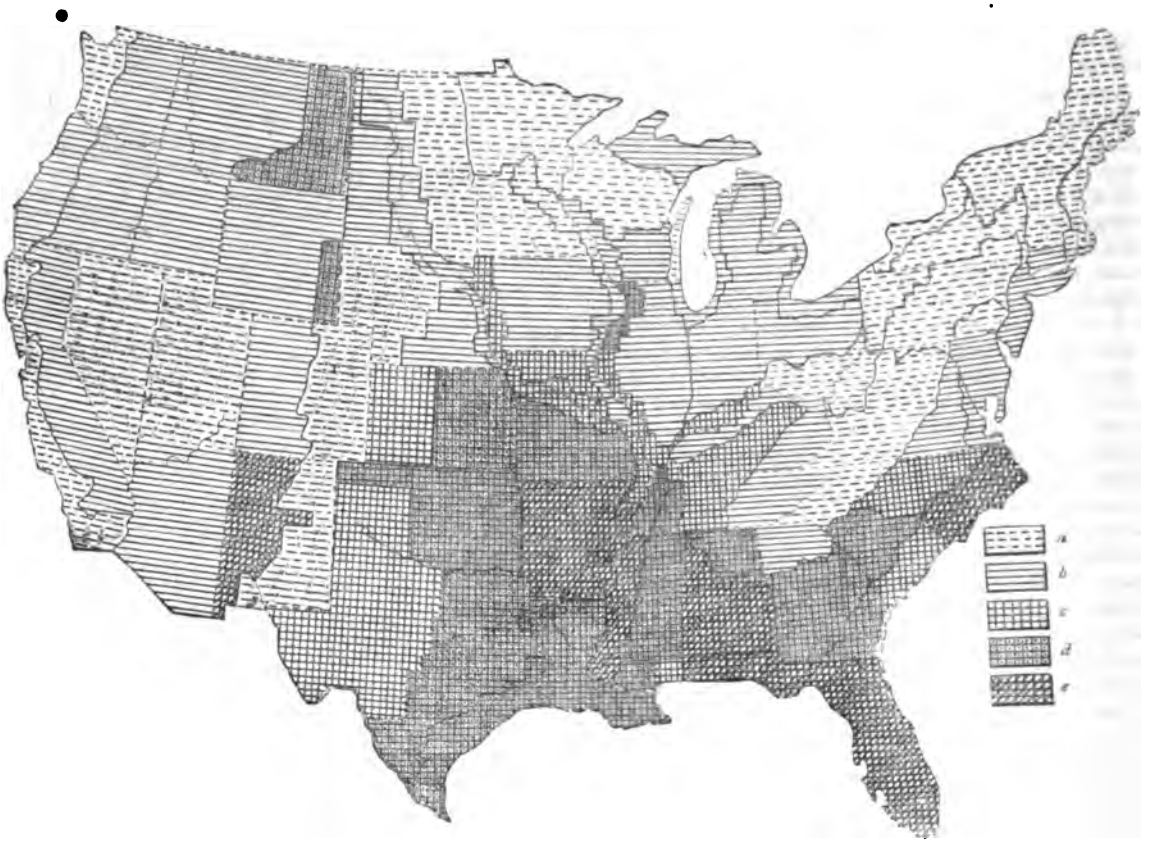

CHART I.—Map of the United States, showing the distribution of deaths from malarial fever as compared with deaths from known causes, Census of 1880. *a*, Under 10 per 1,000; *b*, 10 to 30 per 1,000; *c*, 30 to 50 per 1,000; *d*, 50 to 70 per 1000; *e*, 70 and over per 1,000

As compared with the North and East, much of this malarious region is a thinly settled country, an almost purely agricultural country, and not a rich country. I need hardly tell you that the physician who has received his chief clinical instruction in the office of his preceptor in Vermont or New Hampshire, supplemented by distant glimpses of a few cases in hospital in Boston or New York, will find himself at a loss at first in dealing with the emergencies of daily practice in Arkansas and Mississippi. He will be subjected to influences which at times are dangerous to one who is not acclimated, and which tend to produce depression of spirits, want of energy, and bad health. He will not have free and constant access to scientific companionship, nor be stimulated by the influence of learned societies, and he cannot avail himself of the ordinary sources of amusement, education, and rest, such as art galleries, the drama,

[1] A map of the United States was here shown, on which the proportion of persons calling themselves physicians to the population in the several States was indicated by different shades of color.

libraries, and museums, etc., which are found in the large cities. Moreover, the pecuniary reward which the practitioner in many of these places can reasonably hope for is comparatively small.

Taking all these things into consideration, it is clear that if a man after spending from six to eight years, and from £1,000 to £2,000 in acquiring such a general and professional education as it is now considered that a skilled physician should possess, then settles in such a region, with the prospect of an average income of from £150 to £200 per year, it is not from pecuniary motives alone. There are such men in such places, men who are not only highly educated and skilled practitioners, but who are also original investigators and thinkers. It was within the limits of this malarial shadow that the foundation of modern gynecology was laid by Marion Sims, of abdominal surgery by McDowell, Battey and Gross, of an important part of the physiology of the nervous system by Campbell. Nevertheless the rule holds good that malaria and science are antagonistic; the exceptions prove the rule.

Nor can the inducements for highly educated physicians to settle in thinly settled localities be made stronger by any form of penal or restrictive legislation. Any attempt to fix a standard of requirements or qualifications for practice which shall be the same for such rural districts and for the large cities and manufacturing towns, must result in the adoption of what competent judges would consider so low a standard as to be ridiculous and useless. The demands are widely different, and corresponding differences exist in the sources of supply, that is, in the medical schools.

There is a class of medical schools in the United States whose object is to give the minimum amount of instruction which will enable a man to commence the practice of medicine without much danger of making such serious and glaring blunders as will be readily detected by the public. There are other schools whose aim and object is to make fairly well trained practitioners; the general character of the instruction given in these being substantially the same as that given in your English hospital medical schools. The results of such a three years' graded course of instruction in medicine as these schools furnish depend upon the character of the material upon which they work; that is to say, upon the general preliminary education possessed by the student at the time of his matriculation. This is evidently too often defective, and only a few schools have thus far ventured to establish any standard of preliminary examination which at all approaches in its demands that which is required in England.

The proverb that it does not pay to give a $5,000 education to a $5 boy is clearly of American origin, and sums up a great deal of experience.

You have nineteen portals of entrance to the profession and have not found it easy to keep them all up to the standard. In America we have over eighty gates, a number of turnstiles, and a good deal of the ground is unenclosed common. Many of our physicians are more or less dissatisfied with this state of things and with the results thereof, and every year in some States efforts are made to secure legislation which it is supposed will protect the interests of the profession, though those who advocate such legislation are usually prudent enough to claim as their only motive a desire for the protection of the public.

Now, how does this free trade in medicine and the low standard of qualification, or no standard at all, required by law affect practitioners as individuals? To answer this we must divide the profession into several classes. In the first place, in all our cities, great and small, there is a large class of physicians who are as well educated and as thoroughly competent to practise their art as can be found in the world. They have studied both at home and abroad, have had extensive clinical training, are always supplied with the latest and best medical literature and the most improved instruments, and many of them are connected with hospitals and medical schools. Among them are found the majority of our writers and teachers, and the successful men are the survivors of a struggle in which there has been keen and incessant competition. These physicians, whose positions are fairly assured, and who, as a rule, have all the practice they desire, are not usually active leaders in movements to secure medical legislation, although they passively assent to such efforts, or at least do not oppose them; and their names may sometimes be found appended to memorials urging such legislation. They are clear-headed, shrewd, "practical" men, who know that their business interests are not specially injured by quacks and ignoramuses, rather the contrary in fact, for they are called on to repair the damage done by the quack to people who have more money than brains; and they are not inclined to risk the fate of the Mexican donkey who died of "*congojas agenas*," that is, "of other people's troubles."

Then there is another large class of honest, hard-working practitioners who rely more on what they call experience and common-sense than on book learning. Many of these have obtained assured positions of respectability and usefulness, and are comparatively indifferent to medical legislation so far as their own interests are concerned. Others, however, who are not so successful, feel the competition of the local herb doctor or of the travelling quack more keenly, and have more decided views about the importance of diplomas. Among these are the young men who have not yet acquired local fame, and who are apt to become very indignant over the doings of some charlatan in the neighborhood, or of some druggist who prescribes over his counter. These last are usually quite clear in their minds that the State ought to interfere and prevent injury to the health of the people.

I have known two unsuccessful physicians who finally abandoned practice, and who gave as a reason for their failure—one that "he did not know enough," and the other that "he had not the manners and tact which would inspire confidence in his patients;" but such frank-speaking men are rare.

Thus far, as a rule, the efforts which have been made to secure legislation upon medical matters in America have come from the profession itself, and have been chiefly urged and recommended by physicians. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but intrusts the care of its health and the lives of those who are nearest and dearest to it to almost any one who announces himself as prepared to take charge of them. The number of those who profess to practise medicine in the United States and are not qualified to do so is undoubtedly large, though by no means so large as one might suppose after listening to the impassioned eloquence which is duly aired every year upon the subject. There are some advertising charlatans, and travelling quacks are occasionally to be met with, but they are rare.

The most rigid tests of qualification, in our profession, in the United States, are those required of candidates for admission into the medical departments of the army and navy. The standard established for these is about the same as that for the corresponding corps of the English army and navy; and of the candidates who apply from seventy to eighty per cent. are rejected.

Certainly we must admit that this percentage indicates an unsatisfactory state of things. But what evidence have we as to its results upon the health and life of the people? What shall we take as the measures of the difference of skill in physicians? The death-rate? If we compare the death-rate of the United States with those of other civilized countries, we find that it is as low as any with the exception of Sweden. Does a low death-rate mean better sanitary condition or more skill among

the doctors? For the last twenty years the death-rate has been diminishing in England; the average amount of life for each person here has been increased; but I observe that the sanitarians claim this as proof of the value and importance of their efforts, and that nothing is said about its being in any way due to increase in medical skill or to improvements in medical science. Evidently this test is not a convincing one. Almost the only matter in which figures seem to demonstrate the importance of superior medical education and skill is in the statistics of deaths due to childbirth and of the results of surgical operations.

The proportion of deaths from childbirth to the number of births is decidedly greater in the rural districts than in large cities, and among the colored than among the white population. If this difference were found only in the United States statistics it might be accounted for by the differences in the trustworthiness of the sources from which the data are derived; but we find similar differences in England, and we must admit that these are probably largely due to the fact that in cities labor cases receive more prompt and efficient professional care than they do in the country. I need hardly call your attention to the results of antiseptic surgery, or of modern abdominal surgery, as compared with those of twenty-five years ago. Here there can be no question as to the improvement. It is well to remember in this connection that whatever undue prolongation of disease or unnecessary mortality is due to want of skilled medical treatment occurs mainly among the wage-earners—the farmers, mechanics, salesmen, needlewomen, etc.—and not among the rich, nor yet among the very poor.

Now, seeing that really efficacious legislation with regard to medical education or to the practice of medicine must, like all efficacious legislation, be substantially in accord with public opinion, since it is impossible to continue to punish for any length of time that which public opinion does not condemn; and as the great mass of the people of the United States have not as yet had such evidence as they can understand, and which would thoroughly convince them that it is to their interest to suppress quackery, it follows that it is necessary to go slowly and to allow such evidence to accumulate.

To me it seems that the most important of the first steps to be taken in this direction is one which has already been taken in Great Britain—namely, the requirement that every death in the community shall be registered, and that in such registration satisfactory evidence shall be given as to the cause of death, sufficient at least to prove that such cause is what is known as a natural cause, that is, that it is not due to crime. When it is admitted that one of the duties of government is to provide for such registration, both in the interests of life and to secure the rights of property, it follows, necessarily, that those persons whose certificates as to the cause of death are to be accepted as satisfactory evidence that there has been no foul play, must present evidence that they are properly qualified to make such certificates. The principle is precisely the same as that which induces a government to provide for the examination of the medical men whom it employs in its army and navy.

So far as the art of medicine is concerned the demand has much, though by no means all, to do with regulating the quantity and quality of the supply; and there are few localities in the United States where the qualifications of the medical man are not fully up to the standard which the community is able to appreciate and is willing to pay for. In the natural order of things suffering and death are the remedies for ignorance, weakness, and vice, and the means of preventing the transmission of these characteristics to offspring. These remedies, though effectual, are drastic, and we do our best to avoid them, but perhaps it is well that the penalties cannot be done away with altogether.

The laws regulating the practice of medicine in the United States are all State laws. If we were to judge only from what may be found in the statute-books, assuming that all the laws contained therein are duly enforced, we should find that nearly two-thirds of the States have laws ostensibly regulating the practice of medicine within their borders. As a matter of fact, however, in over half the States which have laws on this subject no attempt is made to enforce them, and in almost all of them the possession of a diploma, no matter from what source derived, is all that is required.

Of the various methods which have been tried in different States to insure by law that physicians shall be properly qualified, I will call your attention to two which are of special interest.

The first is that of Alabama, the principle of which is to organize the whole medical profession of the State, and use it as the means of regulating the qualifications of practitioners and of caring for the public health. The Medical Society of the State of Alabama, with its branches the county medical societies, thus forms a part of the machinery of the government; it appoints boards of medical examiners, selects State and county sanitary officials, supervises the registration of vital statistics, the administration of quarantine, etc.—in short, it is the State Board of Health, and the county branches are the county boards of health.

In this State the possession of a diploma does not give the right to practise, it simply enables the owner to go before the examining board. The examinations before the County Board are partly in writing, and are subject to review by the State Board, which has in some instances publicly condemned the local examinations as not sufficient.

This system has now been in operation nine years, and has gradually been consolidated and improved by educating local boards, and getting all physicians interested in it, until it is now working fairly well. Much remains to be done, and it is too soon to predict results; at present the success of the system is largely due to the wisdom and energy of one man, who has given his whole time and labor to the work, and it remains to be seen whether the machine which he has built will work well without him.

The second system to which I will call your attention is that of the State of Illinois, which was commenced in 1877, or about the same time as that of Alabama.

In Illinois anyone who presents a diploma, or license to practise, from a legally chartered medical institution in good standing, is entitled to practise, and the State Board of Health is to decide as to what shall constitute "good standing." The Board of Health also examines all persons who do not possess satisfactory diplomas, and who nevertheless wish to practise in this State.

One of the greatest practical difficulties in the way of providing any system of State examinations in medicine in the United States is that public opinion will not support any law which can be supposed to condemn, or in any way to injure, homœopathic and eclectic practitioners or their schools, and hence any proposed law relating to medicine, or to the organization of State boards of health, which does not recognize the existence of these sects will, in many States, at all events, meet with enough opposition to defeat it. In Illinois this difficulty was surmounted by the arrangement that of the five physicians on the Board, one should be homœopathic and one eclectic. The Kansas law, passed last year, goes further in this direction, and provides that appointments must be so made that no school of medicine shall ever furnish a majority of the members of the Board. Much to the surprise of many, the Illinois plan has worked very well—there has been no quarrelling in the Board—and the homœopathic and eclectic members seem to have upheld quite as high a standard of qualification as their fellow-members. The results of the work in Illinois has been very good. A large number of ignorant charlatans were forced to leave the State.

The requirements of the Board as to what shall constitute a medical college in good standing have been raised, and it has thus caused improvement in the medical schools not only of Illinois but of other States. Moreover, the neighboring States have been stimulated to action, not only by the force of example, but because they received the men who had been driven out of Illinois, and found the accession an unpleasant one.

As in the case of Alabama, it is too soon to judge definitely of the results; and in Illinois, also, the satisfactory working of the system is largely due to one man, the Secretary and executive officer of the Board, who has given his entire time to the work. I do not, by any means, wish you to suppose, however, that I consider this as being a serious objection to this or any other plan, for in the building up of any organization, or the carrying out of any system, much must always depend upon some one man.

The relations of the United States Government to medical education and to the practice of medicine are indirect only, the regulation of these matters by law being part of the police power which, under the Constitution, is reserved exclusively to the individual States. The United States employs physicians in its Indian Department, in the Pension Department, in the Marine Hospital Service, and in the medical departments of the army and navy, and it has power to regulate the practice of medicine in those Territories which are not yet organized into States, and also in the District of Columbia; but thus far it has made no use of such power. The qualifications of physicians employed in the army and navy and in the Marine Hospital Service are determined by examinations made by boards of medical officers belonging to those services. The possession of a diploma from a respectable medical college is a prerequisite for such examination, but beyond this it does not count; that is to say, the examination is the same for the holders of all diplomas, and covers all branches of medicine. But while the relations of the general Government to medical education are thus indirect, they have of late years become of very considerable practical importance, and are now exerting much influence upon medical investigations and literature. This is being effected by the museums and libraries which are now being formed under the auspices of the Government at Washington, and also, to some extent, by certain special investigations undertaken by the Government in the interests of preventive medicine. Of these various agencies one of the most important is the library which has been formed at Washington, under the auspices of the Medical Department of the Army, in connection with the Army Medical Museum, both of these institutions being a part of the results of the late civil war. The museum was at first formed to illustrate military medicine and surgery, giving the results, primary and secondary, of injuries inflicted by modern weapons of warfare, and of the diseases of armies in the field; in which direction the collection is unrivalled in extent and completeness. Gradually its scope has been enlarged to include illustrations of anatomy, development, and all branches of pathology and therapeutics, so that it is fast becoming a museum covering the whole field of medical science. In like manner the library, which commenced in a collection of those books relating solely or especially to military medicine and surgery which were required in the compilation of the "Medical and Surgical History of the War," has expanded into a great medical library, which is now one of the best practical working collections of the kind in the world. These collections, then, no longer appertain exclusively, or chiefly, to the business of one department, but belong to the whole profession of the United States as a body; and the department which has charge of them is managing them from this point of view. The influence of the library in stimulating research, and upon the quality of medical literature, is already very perceptible, and is destined to increase with advancing years. I think I may also venture to claim that the utility of these collections, and especially of the library, is by no means confined to the medical profession of the United States, for the catalogues and indexes which are being issued in connection with them are of service to medical writers and teachers all over the world.

As regards investigations into the causes of disease, undertaken at the expense of the general Government, only a beginning has as yet been made; but it is sufficient to indicate future possibilities and probabilities. The main importance of the work of the National Board of Health, which was organized in 1879 under the stimulus of the great yellow fever epidemic of the previous year, was due to investigations upon the causes of yellow fever and diphtheria, the relations of soils and of water-supply to certain diseases, etc., investigations of the same general character as those which are being prosecuted under the auspices of the Local Government Board in this country, and of the Imperial Board of Health of Germany. It is true that, owing to circumstances which I cannot here explain, the work of the National Board of Health has been stopped; but there is every probability that it will be resumed, with perhaps some change of organization, at no distant day, and I need not dwell upon the vast importance to medical science of organized and systematic work in this direction. Similar investigations have been undertaken by State boards of health, and especially by the State Board of Health of Massachusetts, and the fact that governmental health departments are tending to work in this direction is significant as to future co-operation from such sources.

In this connection should be mentioned the National Museum of Hygiene, which has been formed under the direction of the Medical Department of the United States Navy, which is now one of the most instructive collections of the kind in the world, and has also connected with it an excellent library and a well-equipped laboratory.

Comparative and experimental pathology is also receiving attention from the Government, under the direction of the Department of Agriculture, which is doing some good work in the investigation of the diseases of our domestic animals. Our investigators are, fortunately, not hampered by antivivisection laws, and there is little danger that they ever will be, for though we have our due proportion of fanatics and seekers of notoriety who wish to emulate the British antis, their true motives are so well understood that they have little power to do mischief.

Of medical associations in the United States there are several classes. We have a few local societies, analogous to clubs in their organization, which own property in the form of buildings, libraries, etc., are somewhat conservative in their selection of members, and are only to be found in large cities. Of these the College of Physicians of Philadelphia is the oldest, and has the largest and best library and museum—it will celebrate the hundredth anniversary of its existence next year. In New York the Academy of Medicine, and in Boston the Medical Library Association, are of the same character, and, in general, each large city has a similar society, although as yet they have not become fully anchored and established by the acquisition of property. The second class includes local societies devoted to specialties, such as pathology, obstetrics, etc. These also are found only in large cities, and as yet are few in number. Four of them only have published "Transactions." Corresponding with these are national societies devoted to specialties, such as gynecology, ophthalmology, surgery, pathology, and clinical medicine, etc. These societies meet annually, elect their own members, exercising care in the selection, and publish valuable "Transactions."

Another class is composed of the county medical so-

cieties, which strive to include all regular practitioners residing in their precincts. From these are sent delegates who form the State medical societies and the American Medical Association. The mode of organization varies somewhat in the different States, but the representative principle prevails in all. Most of these societies publish "Transactions;" and the American Medical Association now has its "Journal," and with its work I know that you are all more or less familiar.

As to the condition of medical science and art in America, it partakes of the general progress, for the press now makes all discoveries the common property of the civilized world. The marked feature of the present epoch is the recent advance in knowledge as to the relations between micro-organisms and certain diseases, and the strong stimulus which this has given to preventive medicine. Sanitation is becoming fashionable, and if we may believe some of its votaries, it is a very simple matter to prolong the average lifetime to the scriptural "threescore years and ten." All that is necessary is that everything shall be clean, and every person virtuous.

Having learned to distinguish those diseases which can be prevented much more easily and certainly than they can be cured, we may turn them over to the sanitarian, who has his own battles to fight with ignorance and prejudice. If he succeeds, and so far as he succeeds, he will change, in certain respects, the work of the practitioner.

The lives which are saved from cholera and typhoid, from consumption and diphtheria, and from the acute specific diseases, will, at last, be weakened and destroyed in other ways. The work of the physician will not be lessened by preventive medicine, it will simply be required more for older persons and for another class of diseases. As sanitarians must depend upon practitioners for much of the information which is essential for their work, it follows that if preventive medicine is to become a working power it will bring the mass of the profession into closer relations with the State than its members have held heretofore. What these relations shall be is one of the most interesting, and, at the same time, one of the most difficult, of the many problems with which we, or our successors, must deal. I have referred to some experiments on this subject which are now being tried in America, where it is much easier to make such trials than it is in an older country hampered with vested interests.

Just at present, in this, as in a number of other things, our tendency is toward centralization, both in the several States and for the whole country, and it is not improbable that we may go far on this road in the future.

I come now to the consideration of the second part of my subject, namely, the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the kind of co-operation which you may reasonably expect to receive from the medical profession of that country.

A marked feature of the present day, in medicine as in other things, is the tendency to specialization in study and in practice. But this very development of specialties, of increasing minuteness in the division of labor, increases the necessity for co-operation, and in fact tends to create what we may call the specialty of co-operation. Formerly a rifle, or a watch, was made by a single workman. No two instruments were exactly alike, each piece had its own individuality and was not interchangeable, and the cost of the whole was such as to put it beyond the reach of the multitude. Now, the work on these things is greatly subdivided, one man makes only one small wheel, or spring, or pinion, and another another, each doing his work according to a uniform pattern, rapidly, perfectly, and at comparatively small cost.

But, in addition to the workmen who make the individual parts, it is now necessary to have one person specially skilled in making drawings and preparing patterns, another to assemble the completed parts, and a third to test the whole after it has been put together. As the centrifugal force increases, the centripetal power must also increase.

In one sense medicine as we have it to-day, is the result of co-operation, not of deliberate, centrally planned and direct co-operation, but of natural selection from results produced by many men, often working at cross purposes and, therefore, wasting much energy, but nevertheless working, though blindly, to a common end. And it is safe to predict that in the future much of the best work will be done in the same way, by individual effort inspired by the love of science, by personal ambition, etc. But the results obtained in this way come slowly, and some things that we want can hardly be obtained by individual effort, even if we were willing to wait, hence we must look to organization for help.

This is an age of machinery, of exchanges, of corporations, for all these correspond to one and the same fundamental idea. Men make machines to do what the individual cannot do, and they make them not only of brass and iron, but of men, for such an obvious source of power to the man or men who can master the combination is not likely to be overlooked. One result of such organization is seen in our encyclopedic works on medicine, whether these be called dictionaries or handbooks; another in the great medical journals; another in associations which seek to wield political influence; another in the comparatively recent attempt at collective investigation of disease. With these may be classed also the attempts of government departments to make scientific investigations, to collect libraries and museums, to do things which require long continuity of effort on a definite plan in order to produce the best results.

And it is by the combination of all these, with the efforts of individual workers, that substantial advance and improvement are to be effected.

In this broader view of co-operation it is interesting to consider those fields of labor to which comparatively few physicians can devote themselves, because of want of time and opportunity, but whose proper working is, nevertheless, of the greatest importance to the practitioner.

One of these is experimental laboratory work, and in this direction the prospect of valuable contributions from America is now exceedingly good. Some of the wisest of our most wealthy men have shown their appreciation of the responsibilities which riches entail on their possessors by seeking new channels through which to benefit their fellow-men. While the old and well-known methods of endowing hospitals and charitable institutions are not neglected, there is apparent an increasing tendency to endeavor to promote the advancement of knowledge, and especially of such knowledge as tends to the mitigation of suffering and the improvement of the race, to furnish means for the investigation of disease, to provide laboratories, and to endow medical schools, and thus place them beyond the reach of the temptations and difficulties which must always exist when such schools are dependent upon the fees of students, and are, therefore, practically, commercial manufacturing establishments.

As illustrations of this tendency I may mention the bequest of £1,400,000 by Johns Hopkins to endow, in the city of Baltimore, a university and a hospital, of which the medical department is to be a special feature, to be provided with the best laboratory and other facilities for original investigation as well as for teaching; the gift of Mr. Carnegie to the Bellevue Hospital Medical School of New York, in the shape of a well-equipped pathological laboratory; the presentation by Mr. Vanderbilt, and members of his family, to the College of Physicians of New York, of £200,000, to provide for that school new buildings and clinics having the best means of teaching and research, and the endowment, by an unknown donor, of a laboratory for the University Medical College of New York with the sum of £20,000.

Last year, in his retiring address as President of the New York Academy of Medicine, Dr. Fordyce Barker referred to this tendency to regard wealth as a trust to be used for the benefit of humanity, and after sketching the requirements of the Academy on a scale which would require an endowment of at least a million of dollars, predicted that such an endowment would be furnished by wealthy citizens of the city. I believe that he was right, and that his prediction will become history.

As the class of men who have wealth, leisure, and knowledge becomes greater, there comes an ever-increasing demand, not only for the best medical skill, for the most expert practitioner, but also for exhaustive research in every direction which promises to furnish new means for the prevention or relief of suffering, and for warding off, as long as possible, the inevitable end; and hence there is little reason to doubt that the examples I have named will be followed by others in the near future. With such opportunities, and under such conditions and influences, the stimulus to the young and ambitious worker is strong; we have abundance of material of this kind upon which the process of natural selection can operate, and there is little reason to doubt that the result will be substantial and valuable contributions to physiology, pathology, and therapeutics.

I have already referred to some of the work which has been undertaken by the United States Government for the benefit of medicine and of the medical profession in the formation of a library and the providing of means of assistance in bibliographical research. There is another most important means of advancing medical and sanitary science which only a Government can furnish, and in which field of work England now stands pre-eminent—I refer to vital statistics. In this field the United States Government has thus far done but little, yet enough to show the great interest and value of what we have a right to hope will be done in the future by combining the work of the several States. This is one of the fields in which international co-operation is most desirable; it alone can furnish data sufficiently complete and reliable for a scientific consideration of the relations of disease to geographical and race distinctions.

Geographical pathology is a very old branch of medicine, as old, at least, as Hippocrates, whose treatise on airs, waters, and places is justly famous. Permit me to remind you of its opening clauses. "Whoever wishes to investigate medicine properly should proceed to consider the seasons of the year and what effects each of them produces, the winds, the qualities of the waters, the situation and exposure of the city, the character of the ground, and the mode of life of the inhabitants." Then, says the wise old Greek, "From these things he must proceed to investigate everything else."

There is a breadth of view in that last sentence which is particularly satisfactory. Since the days of Hippocrates there has accumulated a vast amount of literature relating to the supposed connection between the topographical peculiarities of different cities and countries, and the diseases which prevail in them; but when the books and essays which come under the heading of "Medical Topography" are examined it will be found that the topographical part is much more complete than the medical—which last is mainly confined to the consideration of malarial diseases, and is vague and indefinite with regard to their relative prevalence.

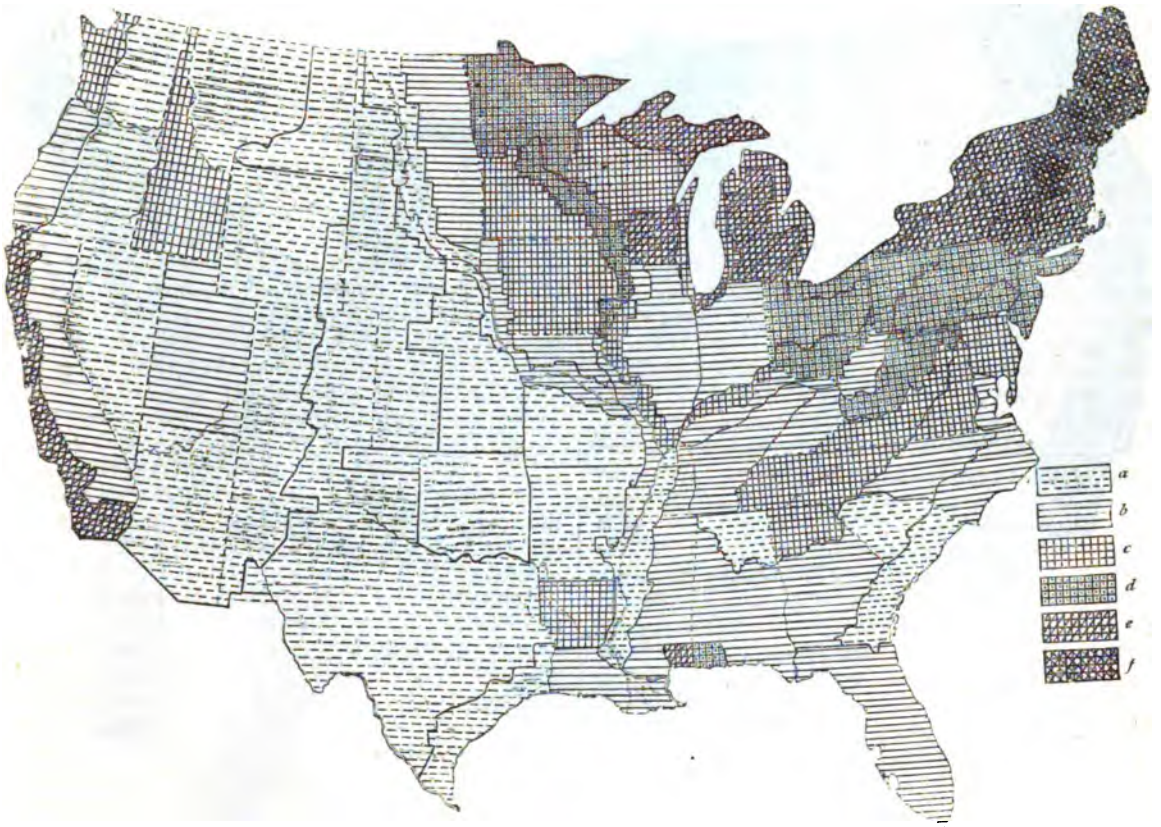

CHART II.—Map of the United States, showing the distribution of deaths from cancer as compared with total deaths from known causes, Census of 1880. *a*, Under 10 per 1,000; *b*, 10 to 15 per 1,000; *c*, 15 to 20 per 1,000; *d*, 20 to 25 per 1,000; *e*, 25 to 35 per 1,000; *f*, 35 and over per 1,000.

Much the larger part of our really valuable information on this subject has been obtained within the last twenty-five years, as Professor Hirsch points out in the preface to the recent edition of his very valuable "Handbook of Geographical and Historical Pathology," and while the contributions of the United States to this branch of medical science have been already important, I hope to be able to show you that they are probably destined to be of steadily increasing importance in the future. Considered as a body the opportunities of the medical profession of the United States for the study of the manifold influences which can cause, modify, or prevent disease,

are in some respects unequalled. As regards peculiarities of climate, soil, altitude, etc., the country is so large as to afford almost every variety of combination, so that nature may be said to be making a series of experiments, on a grand scale, upon the mass of humanity which is so rapidly increasing in the new world. Especially is this the case with regard to the problems of heredity as connected with the mysterious relations of certain forms of disease to race. America is at present the great mixing-bowl into which are pouring streams of human life from origins the most diverse, from regions the most remote. Black and white, red and yellow, long skulls and short skulls, Celt, Teuton, and Slav are being brought together under similar conditions of climate, food, and occupation, thus permitting of the comparison and study of the different effects, if such exist, which result from variations in parentage under conditions of exposure to the same causes of disease.

For a little time—a generation or two at least—the different streams remain pure, then there is more or less mingling, in some cases very little, in others very intimate, but always there is an opportunity for studying the races separately, as well as of investigating the results of their various mixtures.

To illustrate the possibilities in this direction I will call your attention to some peculiarities in the distribution of deaths from certain causes in different parts of the United States, and for this purpose I shall make use of the data from our last census, taken in 1880. We have no general and uniform system of registration of births and deaths. The larger cities and about half a dozen States have such a system; but for much the larger portion of the country the only means which we have for determining differences in amount or causes of mortality in different localities is through the census, which is taken once in ten years. The data thus obtained with regard to deaths are imperfect, because when these are collected, only at the end of the year, about thirty per cent. of the deaths are unrecorded; and they are inaccurate, because the reports of the causes of death are not furnished by persons competent to give reliable information with regard to them. Nevertheless, these data are the best that we have, and although for a large part of the country they do not give us the actual number of deaths from any cause or set of causes, they do furnish some interesting information with regard to the relative prevalence and importance of certain causes, and suggest questions and lines for future investigation, although they do not furnish definite and scientific answers.

Take, for instance, this map of the United States (Chart II.), upon which, by varying shades of color, is shown the proportion of deaths reported as due to cancer, as compared with the reported deaths from all causes. Cancer, using the term in its broadest sense, is a disease which seems to be gradually increasing in frequency among civilized nations, and, possibly, to have a tendency to increase with the advance of civilization.

In England and Wales the proportion of deaths from this cause seems to have nearly doubled within the last twenty-six years, and a similar rate of increase can be made out in certain parts of America. How far this increase is a real one, and how far it is due simply to improvement in diagnosis, is a question yet unanswered.

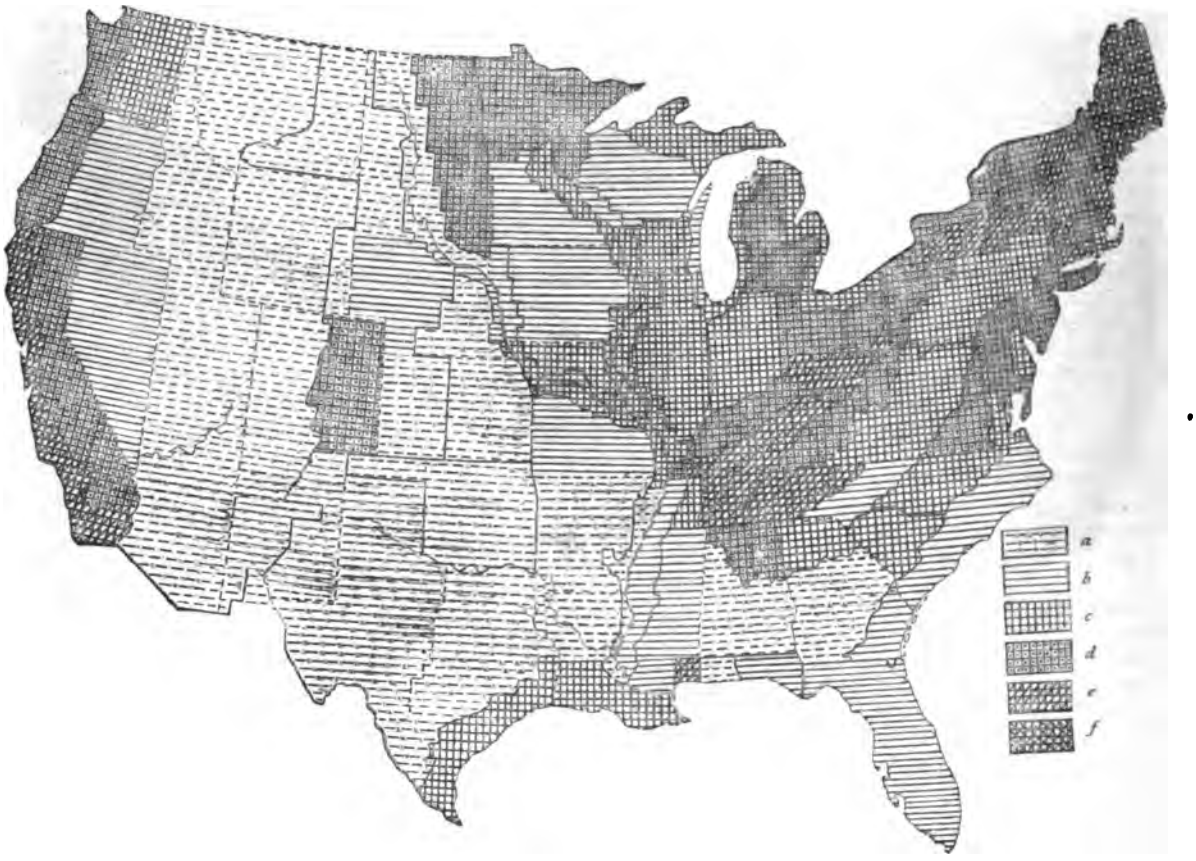

CHART III.—Map of the United States, showing the distribution of deaths from consumption as compared with total deaths from known causes, Census of 1880. *a*, Under 75 per 1,000; *b*, 75 to 100 per 1,000; *c*, 100 to 125 per 1,000; *d*, 125 to 150 per 1,000; *e*, 150 to 175 per 1,000; *f*, 175 and over per 1,000

The mortality from cancer in the United States is proportionately greatest in the New England States, somewhat less so in New York and Pennsylvania, and it causes the least proportion of deaths in the Mississippi Valley and the South generally. The proportion of deaths from cancer in the United States is somewhat greater than it is in England; but it is not possible to make any accurate comparisons in this respect. Now why are the shades on this map so dark on the Northeast and so light in the South? In the first place, cancer is a disease the mortality from which steadily increases with advanced age, as you may see from this diagram. Hence, cancer causes a higher proportion of mortality in those localities which have the greatest proportion of population living at advanced ages, and in the United States

these localities are the New England States, as you will see by this map. One deduction from this, which may perhaps not have occurred to all of you, is that a large proportion of deaths from cancer indicates, to a certain extent, that the locality in which it occurs is a healthy and long-settled one, since it has probably a relatively large proportion of inhabitants, and especially females, of an advanced age. But another explanation of the peculiar shading of the cancer map is found in the relations of race to the tendency to death from this disease. The proportion of annual deaths from cancer per hundred thousand living population was, in round numbers, twenty-eight for the whites, and thirteen for the colored. That is to say, cancer is more than twice as prevalent among whites as it is among colored in the same localities, for these figures apply only to the South. On the other hand, cancer appears to cause a greater proportion of deaths in persons of Irish and German parentage than it does among the rest of the white population, the indications being that between the ages of fifteen and sixty-five the Germans are especially liable to cancer; more so than the Irish, and decidedly more so than the average white population. Now when we remember that the greater part of the colored population is in the South, and the greater part of the Irish and German population is in the North, we have another reason for the differences in mortality caused by this disease in the two sections.

Again, take this map, showing the distribution of the deaths from scarlet fever during the census year. You see that this also was most fatal in the North, and here again the influence of race comes in, because in the negro race the mortality from this disease appears to be very low. This disease has always been much rarer in the South than in the North, and the contrast was much stronger in former years than it is at present; but this cannot be explained solely, or even to any great extent, by difference of temperature, because scarlet fever has often been epidemic in the tropics, and, on the other hand, in many localities in temperate climates it is among the rarest of diseases.

Here is another map, showing the distribution of deaths reported as due to diphtheria during the year. Diphtheria is a disease which has been unusually prevalent in the northern portion of the United States for several years. During the census year it causes 2,374 deaths out of every 100,000 deaths from all causes, while in England, for the year 1880, the deaths from diphtheria were 532 per 100,000 deaths from all causes; that is to say, the comparative mortality from this disease in England was less than one-fourth that of the United States for the same period. Diphtheria, again, is essentially a disease of the North, but especially of the Northwest. It causes an excessive mortality in children of German parentage, sufficiently so to show that here again the influence of race comes into the problem, although, probably, only indirectly; that is to say, it is probable that it is the habits of a peculiar class of people which favors the propagation of the disease rather than any physical peculiarities in the structure of their bodies.

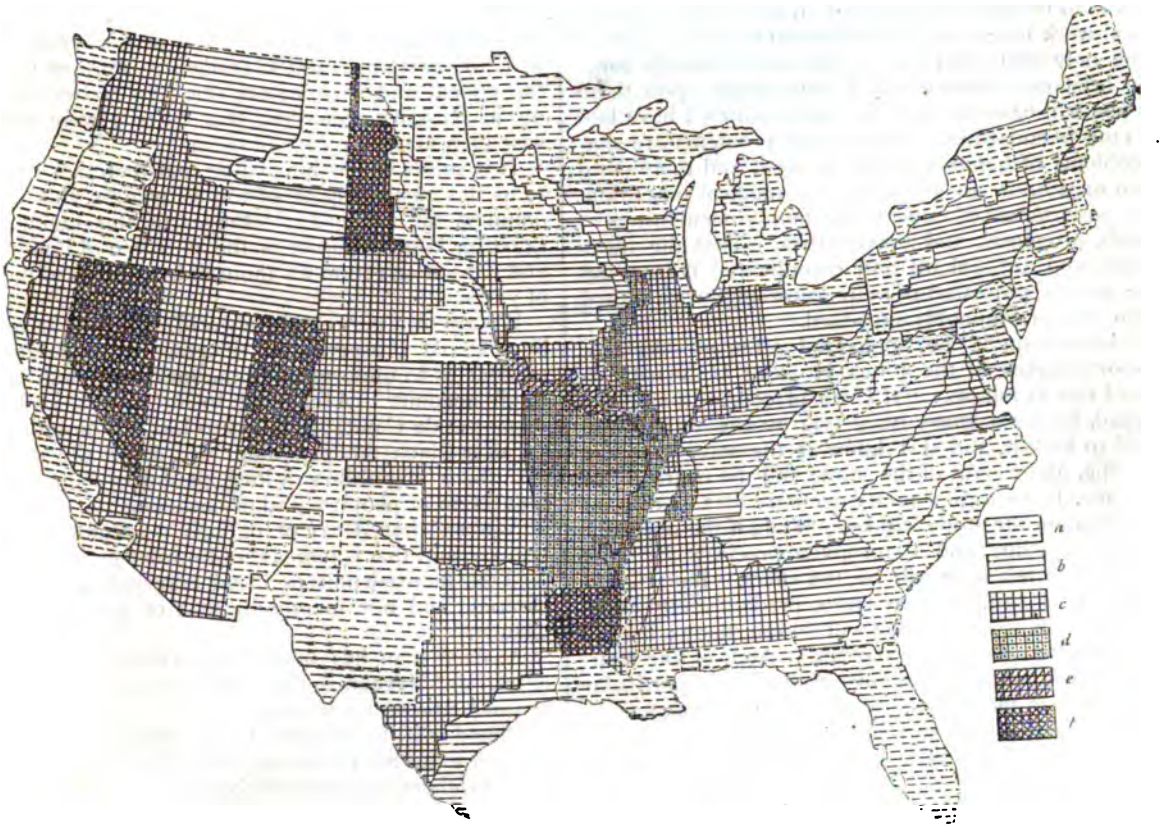

CHART IV.—Map of the United States, showing the distribution of deaths from pneumonia as compared with total deaths from known causes, Census of 1880. *a*, Under 75 per 1,000; *b*, 75 to 100 per 1,000; *c*, 100 to 125 per 1,000; *d*, 125 to 150 per 1,000; *e*, 150 to 175 per 1,000; *f*, 175 and over per 1,000.

Two more illustrations of the geographical distribution of disease in the United States may be of interest in this connection. The first is that of consumption, the second, of pneumonia.

Consumption is a vague term, and as used in the census no doubt includes many cases which were not true tubercular phthisis. It is reported as causing twelve per cent. of all the deaths, or more than any other single cause. In England and Wales, in 1880, it caused a little over nine per cent. of all the deaths. Such wholesale ratios are, however, of little interest or value. There are very great differences in the liability to this disease in different parts of the United States, as the map makes sufficiently evident, and it is from a study of the causes of these differences in the data derived from large masses of people, combined with clinical histories and experimental laboratory work, that we have good reason to hope to obtain knowledge, not only of the causes of

this disease, but of better methods of prevention and treatment than are now at our command. It causes a greater mortality among the Irish than in other white races, and, perhaps, a greater mortality among the colored than among the white.

Next to consumption, pneumonia is reported as causing the greatest number of deaths in the United States during the census year, giving a ratio of 8.3 per cent. of all deaths, as against 4.8 per cent. in England and Wales in 1880. Here, again, the local distribution of deaths is interesting, and the contrast between the map of consumption and that of pneumonia is very striking. Here, again, we find that race peculiarity is an important factor in the problem, the proportion of deaths from pneumonia among the colored being much greater than it is among the white.

I have elsewhere commented more fully than it is possible to do here upon these peculiarities of the distribution of certain causes of deaths in the United States.[1] In fact, my only object in calling your attention to the subject is to indicate the direction in which we may hope for good work hereafter, which indication is the chief, if not the only valuable result of the work already done. In the brief comments which I have made upon these maps you will have noticed the stress which I have laid upon race peculiarities. These race problems are simply problems of heredity taken in mass, and there is no need to urge upon an assemblage of medical practitioners the importance of considering family peculiarities in diagnosis, prognosis, and therapeutics. That the questions involved are difficult and complicated is true, but we are already possessed of more knowledge with regard to them than is commonly supposed.

In a lecture on "Life," delivered a few months ago, Professor Brookes, of the Johns Hopkins University, illustrated this as follows: "If I am placed, with my eyes bandaged, before a stone lying free on the surface and am told to kick it, and if I know at the same time the size, shape, and weight of the stone and the character of the surface, I can form a pretty accurate idea as to what the result upon the stone will be. While if the object to be kicked is a dog, and I am given precisely the same data, I cannot tell what will be the effect. But if I can see the dog, I can, in many cases, predict pretty accurately. If he is a bulldog, he will do one thing; if he is a Gordon setter, he will do another." And, in like manner, the old family doctor knows that when a particular disease appears in his neighborhood, he may expect to see it produce in one family convulsions, in another collapse, and, in a third, little or no danger or inconvenience.

This kind of knowledge is, however, at present mainly confined to individuals, it has not become a part of the world's knowledge; it is not defined; in other words, it is not scientific. To make it so is the work of the future, and in this work I hope that we shall be able to help you.

I have spoken to little purpose if I have failed to show you that there is a great deal of human nature in American physicians, and it is a kind of human nature with which you are tolerably familiar. It should be so, for we are of the same race—a race which, perhaps, as Emerson says, "sets a higher value on wealth, victory, and material superiority than other men, has less tranquillity, is less easily contented." Our ancestors were restless, fighters, freebooters, and from these ancestors we have the common inheritance of energy; of what *we* call "firmness," and our opponents unreasonable pig-headed stubbornness; of liking to manage our own affairs, and, at the same time, to exercise a little judicious supervision over those of our neighbors; of hatred of humbug and lying; and, in spite of our discontent, of a firm belief that our wives and children, habits, houses, modes of business, and of treating disease are, on the whole, better than those of any other people under the sun.

Privately, and between ourselves, we grumble and declare that the country and profession are going to the dogs—nay, we must do so, or we should not be of true English blood; but there is no need for me to tell you that these are only "growing pains," and not symptoms of progressive ataxy.

While we must consider the difficulties in the way of the improvement of the science and art of medicine, difficulties due to ignorance, to indolence, to conflict of interests, and to the eternal fitness of things, the existence of such difficulties is not a matter to be bemoaned and lamented over. These obstacles are the spice of life, the incentives to action, the source of some of the greatest pleasures which it is given to man to experience.

The child spending a happy hour with its new puzzle is a type of the scientific investigator. The naturalist who objected to the statement that this is a miserable world which it is well to be soon done with, on the ground that there are still many species of rhizopods which he had not examined and classified, is another type. On the ethical and sociological side the matter is summed up in Ruskin's aphorism, that "Fools were made that wise men may take care of them."

It is surely not without cause that there has been given to us this restless spirit of inquisitiveness, this desire to compass the heavens and the earth, this raging, infinite thirst for knowledge—it is the outcome of brain-training and natural selection for thousands and tens of thousands of years.

We are in a period of the world's history characterized by material prosperity, by increase of populations, by tendencies to uniformity, to the making of individuals of small account. According to the Swiss philosopher, Alphonse de Candolle, this is to last a thousand years or so, after which the pendulum will swing the other way, and there will follow a long period of diminution and separation of peoples, and of decadence.

Against that decay of nations we know of but one remedy, and that is increase of knowledge and of wisdom. And this increase must be in *our* knowledge, in the world's wisdom, and not merely in that of John, or Fritz, or Claude.

As each man has special opportunities and duties, if he can only recognize them, so it is with guilds, with professions, and with nations.

I have tried to indicate to you some of these opportunities which are presenting themselves to my colleagues, your brothers, in the lands beyond the sea, and I hope that I shall not be considered rash or vainglorious in saying that I believe they will so use those opportunities as to return compound interest for what they have received from the storehouse of our common inheritance. Force changes form and place, the stored energy of the soil of our plains and valleys has been coming here in the form of meat and grain, has appeared in muscle and brain and in a hundred other shapes, but none has been destroyed; our loss has been your gain, and in our turn we have received full and fair exchange.

It is our part now to remember that there are not two springs in the year, there are not two periods of youth abounding in energy and desire, or of manhood's strength and self-poise, in the life of any man or of any nation, and for us, as for those who have been before us, the Kanuri proverb holds true, "*Kabu datsia, kargum bago*"—The days being finished, there is no more medicine.

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[1] See Report on Mortality and Vital Statistics of the United States, as returned at the tenth census. 2 vols. 4to. Washington, 1885–1886.

SURE CURE FOR CORNS.—A man in Geneva advertised a certain cure for corns, full directions to be sent on receipt of one mark. Those who inclosed the proper amount received by return mail some doggerel verses advising amputation as an infallible preventive of further discomfort.

SOME POINTS IN UTERINE PATHOLOGY.

By J. C. OLIVER, M.D.,

CINCINNATI, O.

THERE still appears to be a considerable amount of mystery connected with uterine pathology, in spite of all that has been done to elucidate this subject. Each gynecologist is expected to have his own theory concerning the causes of uterine displacements and the manner in which they operate. Each physician who claims any eminence in this specialty is expected to invent a pessary, forceps, or speculum, which he considers far superior to any other.

With these facts borne well in mind, we still have the temerity to advance a theory as to the causes of uterine displacements. We have been impressed with the fact that gynecologists have written all around this theory, but none whom we have read have distinctly and clearly pointed out what we shall endeavor to explain.

Professor Huxley points out the fact that nearly one-half the weight of the body is supplied by the muscles and their appurtenances. We are told that about one-fourth of the blood in the body is sent to the muscles, and also about one-fourth passes through the liver, and it is in these parts that the greatest changes in the blood takes place (Foster's "Physiology," p. 40).

A fact that has been almost universally received is that the uterus and appendages are very prone to congestion, mostly passive in its character. We propose going a little further back to inquire into the causes producing congestion. In order to accomplish anything in that line we shall have occasion to scrutinize the local conditions, and also conditions remote from the uterus.

The position we take upon this subject is, that the deficient development of muscular tissue and power among our females is the great underlying cause of uterine diseases of an inflammatory or mechanical nature.

As we have had occasion to mention previously, the congestion is venous or passive in its nature, and is due to some interference to the return flow of the blood, either located within the uterus or between the uterus and the heart.

It seems to me that the early life and habits of our girls is specially adapted to the production of troubles in after life. From their earliest years in life a large majority of our girls have a very strong prejudice against exercise in mostly any form. They prefer riding to walking; they do dance some; but so far as good, general muscular exercise is concerned, they never know exactly what it means. As a consequence of this life of inactivity and muscular idleness, the muscular tone of the entire system is very much lowered and impaired. Less blood than its fair proportion is sent to the muscular apparatus, and consequently any little exercise wearies them.

These pelvic derangements are not confined solely to the female portion of our community, but males suffer with what, to my mind, are similar conditions. Men leading a sedentary life, without the opportunity or inclination to exercise their muscles, are very subject, as we all know, to hæmorrhoids, constipation, etc.

The returning blood from the uterus and appendages passes through the pampiniform plexus, and thence to the inferior vena cava. A fact in regard to the anatomical peculiarities of these veins that should be borne in mind is that they are not supplied with valves, and consequently a backward pressure in these parts is encouraged. If the muscles are not active, the blood going to them is lessened in proportion to their inactivity; hence the blood that should be sent to the muscles must find its way into other channels. As it cannot be sent to the vascular apparatus, it must be sent in excess to the viscera. Now this excess of blood causes a congestion, and as the same conditions remain operative, the congestion becomes chronic in character, and thus we have developed hæmorrhoids, constipation, and uterine disorders.

This muscular atony produces another condition favorable to the development of uterine displacements, namely, the retentive powers of the abdominal muscles are impaired, and instead of having a firm, elastic, contractile abdominal wall, we have a weak and flabby tissue which scarcely deserves the name of muscle. After the distention of these walls by pregnancy they become still more relaxed, and never return to anything like the muscular tissue we might reasonably expect to find in that locality. I think we shall agree that this is a very important factor in the production of the conditions under consideration.

Another point that should not be overlooked in this connection is the very common union of bilious troubles with menorrhagia, hæmorrhoids, etc. We do not hold that these conditions are the cause of uterine troubles, but that they are produced by exactly the same cause that determines the disease above mentioned, namely, muscular atony. J. Milner Fothergill, M.D., in his book entitled "Diseases of Sedentary and Advanced Life," says: "Behind the liver lies the whole network of the portal venous system, with its myriads of venules, many of which inosculate with the branches belonging to the internal iliac vein. The uterine arteries are tortuous, and share in that capacity for adaptation for change of form, involving elongation, which is requisite for uterine growth in pregnancy. The arteries then are tortuous, while the vascular supply is, as a whole, large. The veins, too, are tortuous, and inosculate with each other freely. Consequently any interference with the blood-flow through the liver would react backward upon the whole vascular network of the pelvis, including alike the uterine plexuses and the hæmorrhoidal veins. From this would follow congestion of the whole area, alike of the uterus and the mucous lining of the bowel. The swollen veins of the mucous lining of the reproductive organs and the engorged uterine sinuses would set up both the excessive flow at the menstrual period and the leucorrhœa found during the interval. The venous turgescence of the rectal lining membrane would give either hæmorrhoids or a relaxed state of the rectal wall, which would either lead to prolapsus or produce folds of relaxed mucous membrane requiring removal by the knife. The addition of loaded bowels to this interrupted flow of venous blood would aggravate the condition" (pp. 45 and 46).

This hypothesis receives still further support from the fact that our muscular women are much less liable to uterine troubles than our less muscular, and consequently weaker, sisters. This is exemplified further by the fact that men who resort to active muscular exercise (I do not mean professional athletes) do not suffer from piles and other pelvic and intestinal disorders. Another statement from the authority above quoted is worthy of repetition: "The proportion of female troubles in England as compared to the United States is probably in inverse proportion to the extent of walking exercise taken by the females of the two countries. In America the ladies walk little, and uterine troubles are excessively common there; while in England the appeal to the gynecologist is much less common, especially among women who are much on their legs out-of-doors." We also would like to present the following sentence from the same book: "When the intrapelvic muscles are round and full there is little risk of uterine displacement."

We are told by physiologists that muscular action is one of the principal (if not the principal) causes of flow of blood in the veins. Another cause is the suction-force exerted by the thorax in respiration. These causes are possibly assisted by a contraction of the walls of the vessels themselves. This last force must of necessity be very limited in its action. The blood from all the viscera is, as we have seen, sluggish in its movement, and so there must exist a passive congestion of these parts. If any proof for this last statement is needed, it is furnished by the abdominal symptoms presented in these very

cases. Such women are almost invariably constipated, lack color in their faces, the tongue is coated more or less heavily, their minds are not capable of fixed attention for any length of time, they are easily depressed, and so we might enumerate a long list of symptoms referable to the condition of the abdominal and pelvic viscera.

With this condition as a starting point, we can readily see how the ordinarily accepted causes may occur and act as exciting causes. This hypothesis explains the reason of so frequent congestions of the uterus, lack of tone of uterine ligaments, weakening of natural supports of the uterus, and other causes "too numerous to mention."

As has been mentioned before, the suction-force exerted by respiration is a considerable factor in the production of venous circulation. This important function is more or less embarrassed by the use of corsets among the female population. This same article of dress interferes with the free action of the muscles of the trunk, chest, and diaphragm, and presses the abdominal contents downward toward the pelvic cavity, and thus becomes a factor in the production of displacements. Were the muscular system in better condition this factor would, in our opinion, become much less important in its bearings.

It is always admissible, in discussions of this character, to adduce therapeutic measures to support one's position, and, with this purpose in view, we wish to call attention for a short time to the action of massage in the treatment of this class of disorders. It has been demonstrated that massage of a muscle increases its resistance to the fatigue of exercise, and rapidly restores the muscle to a condition in which it can undergo even greater functional activity than it could primarily (Brunton's "Therapeutics," p. 128). He says: "Massage has a similar action to a very complete and perfect circulation through the muscle, in removing the waste products and restoring its power."

Now, if what has been said so far is true, what is the rational, and at the same time the most promising, plan of treatment to be adopted in these cases? Does it appear rational to use pessaries to support the uterus? Do pessaries ever cure a displaced uterus? Do we increase the power of a muscular organ by using splints? Is the substitution of an artificial for a natural support beneficial? It is claimed by some that the vagina acts as a support for the uterus; this statement is open to considerable doubt, but if we grant the truth of the assertion, why impair the elasticity of the vagina by the use of a pessary? The pessary, in order to be at all efficient, must have some other point of support than the vaginal wall, and the only available structures for such purposes are the bones of the pelvis. If the ends of the pessary rest upon the pelvic walls, they must produce a distention of the vagina, and will not this constant distention produce a lack of resiliency of the vagina?

The pessary is a foreign body, and the animal nature abhors a foreign body. This foreign body will, of necessity, cause an irritation or keep up an already existing irritation. Irritation produces congestion. Congestion produces hypersecretion; and thus we cause or assist the very condition we are striving to combat. These statements are incontrovertible, for who of us has not seen the irritation and ulceration produced solely by a pessary?

Professor Thomas, on page 401 of his work on gynecology, says: "The desideratum is an instrument which will not distend the vagina at the same time that it will support the uterus. Such instruments as sustain the vagina without distending it, and thus allow it to regain something of its former tone and elasticity, are those which should be, as far as possible, selected." We agree with these sentiments, but ask where shall we find such a pessary? The vagina is a closed canal, and any pessary must of necessity interfere with the natural arrangement of the parts.

As has been mentioned, the pessary must have a point of resistance in order to be at all effective, and the object of pressure below the uterus is to combat pressure from above; and by this means we have two forces opposed to each other, with the uterus as the central point. What could be a more certain way of producing a bending of the uterus than these very means? When it is borne in mind that the uterus is not a solid body, this action and reaction assume very respectable proportions. If it were a solid body, it would of course pass in the direction of least resistance.

The secretions from the uterus and vagina adhere to the pessary, and sooner or later undergo decomposition, and were the mere presence of a foreign body not sufficient to produce irritation, we have the presence of this decomposing secretion ready to turn the scale in favor of irritation.

Other objections may be urged against the use of pessaries, such as pressure upon the rectum, the mental concentration of the individual upon her generative organs, the liability of pessaries to change their position, the weakening of natural supports from enforced inactivity, etc.

Dr. E. C. Dudley says: "The various anteflexion and anteversion pessaries which have been devised for the purpose of propping up the corpus are almost useless. Their false reputation depends upon the relief which they frequently give to complicating prolapse, the symptoms of which have been wrongly attributed to anteversion and flexion" (Pepper's "System of Medicine," vol. iv., p. 181).

J. Mathews Duncan says: "Now, in the present great abundance of contorted bits of wood, metal, and vulcanite, and what not, called pessaries, my advice to you is Punch's advice to a young man contemplating marriage —'Don't.'" Further along in the same lecture he says: "They (pessaries) are always harborers of dirt, and always keep the mind watching the part. They are liable to decay, and if long used require to be renewed."

In the same article he says: "As a matter of fact, I find the majority of versions and flexions, as observed in practice and treated by pessaries, have their whole condition of displacement quite unaltered by the pessaries, even while in" (*British Times and Gazette*, vol. ii., pp. 769, 770. 1882).

The important question arises in all these cases, as to whether the uterine displacement is a primary condition or whether it is the secondary manifestation of a weakened and debilitated state of the general health. Whether, in other words, the general health is not so far deteriorated that any exciting cause of disease may serve to light up a condition which would never occur were the woman's constitutional condition good.

Pregnancy, as we all know, leaves many of our women with subinvolution, displacements, etc. This should not occur, according to physiological laws, and occurs but seldom in those women who are well developed muscularly.

With these facts borne in mind, it appears perfectly rational to direct our primary treatment to the constitutional condition, and consider the uterine displacements as entirely secondary in their importance.

The plan of treatment should assume about the following order: 1, Build up the general health; 2, increase the quality of the blood; 3, restore the retentive power of the abdomen; 4, divert blood to other parts than the generative tract; 5, increase the thoracic cavity; 6, increase tonicity of natural supports; 7, regulate the action of the bowels; and 8, remedy the displacement, if any exists at this time.

It has been demonstrated that the uterine ligaments contain muscular fibres, and muscular fibres, in order to be effective, should be possessed of good tonicity, and this tonicity is not present if the general muscular system is degenerated.

In these conditions, as in all diseases, we should first direct our attention to a prophylactic treatment. If our young girls were taught to exercise systematically in their

youth—to bring their muscular system up to as good a standard as boys of the same age possess; if they were taught that exercise is not unbecoming a lady; if they were given proper and systematic exercise, instead of being cooped up in a dark, illy-ventilated school-room for six hours, and given lessons sufficient to occupy their minds for six hours more—rendering it almost impossible to obtain time for exercise, we might have a race of girls of whom we could justly feel proud.

In our opinion the school-life of our girls sows the seed for many of the uterine diseases which make their appearance later in life. None of us can shut his eyes to the harvest that is reaped.

Would not the above-mentioned mode of procedure be of great service in building up the general health; in increasing the quantity and quality of the blood; in giving a good retentive power to the abdomen; in diverting blood to other parts; in enlarging the cavity of the chest; in adding tone to the natural supports; and will it not keep the bowels open, and all the secretions in a normal condition? The exercise will certainly improve the appetite and digestion, and must improve and increase nutrition. A large number of additional facts could be adduced in support of these opinions, but enough has been said to indicate their importance.

But we, as physicians, are seldom called upon before actual disease is present, and all the disagreeable symptoms and conditions are in actual operation. We are now called upon to remedy conditions which are the result of preceding negligence and apathy. Our present methods of treating these cases are notoriously inefficient, and are merely palliative. We seldom cure a case of uterine displacement.

The solution of this problem appears to lie in a judicious combination of massage, electricity, and active exercise. The results that have been obtained by massage certainly eclipse any successes by other methods. These results are, for the most part, permanent, and have the additional recommendation of being along the line indicated by nature.

In very many of these cases active exercise would be impracticable, as any exercise tires the patient, and they sooner or later seek comfort by remaining in bed all the time. They thus become confirmed invalids, solely due to a lack of vital force, and of necessity the energy is lacking.

For these confirmed invalids active exercise seems to be strongly contraindicated as a primary therapeutic measure; but not so with massage, for it is with this very class of cases that Weir Mitchell achieves such signal success. After a course of massage we think that active exercise might be used successfully to retain, and even improve upon the benefit obtained from massage; for it has been shown that massage of a muscle increases its resistance to the fatigue of exercise, and rapidly restores it to a condition in which it can undergo even greater functional activity than it could primarily. Brunton, upon page 128 of his work upon "Therapeutics," says: "Massage has a similar action to a very complete and perfect circulation through the muscle in removing the waste-products and restoring its power."

By means of exercise we increase the number and depth of respiratory movements, and also tend to enlarge the chest cavity, and it naturally follows that the suction-power of respiration is increased.

Douglas Graham, in his "Practical Treatise on Massage," points out the fact that the respiratory movements produce a sort of massage of the abdominal and pelvic organs by the to and fro movements of the diaphragm. Of course any increased activity and capability of the diaphragm would enhance its beneficial results upon these viscera.

This does not by any means exhaust what could be said upon this subject, but enough has been said, I think, to clearly prove that this method of treatment far outrivals anything we may expect from the use of pessaries, local applications, and tonic medicines. Of course the physician is called upon to make greater efforts, and to devote more time and attention to these cases than he does at present; but the knowledge of a work well done should be sufficient incentive to urge him to adopt those methods best calculated to give patients comfort and lasting relief.

As regards the permanency of cure, I cannot do better than to refer to the tables given by Douglas Graham, and collected from various sources. These results are certainly a great deal better than our usual results, and appear to give promise of permanent relief in a great many cases of uterine disease.

Dr. Weir Mitchell, in his book entitled "Fat and Blood," says: "I have been lately at some pains to learn the fate of many of my earlier cases, and can say with certainty that every case then treated was selected because all else had failed, and I find that relapses into the state they were in when brought to me have been very uncommon. A vast proportion have remained in useful health, and a small number have lost a part of their gains" (pages 161, 162).

EMBOLISM OF THE MEDULLA.

By GEORGE B. SWASEY, M.D.,

PORTLAND, ME.

I THINK the following case presents clinical features of sufficient interest to warrant me in preparing a brief report of it. Cases of embolism and thrombosis of the medulla were once considered to be of exceedingly rare occurrence; but of late years quite a goodly number have been reported, and by recent writers they are referred to as not being so very uncommon. Cases which were formerly diagnosed as apoplexy of the medulla are now known to have been—some of them, at least—cases in which an obstruction had occurred at some point in one or more of the main arteries supplying this important nerve-centre. Duret, writing in 1873, clearly set forth the more important symptoms characteristic of these affections, and did much to elucidate the anatomy and physiology of the medulla, thereby rendering it more nearly possible to localize a lesion when once it had occurred. Later Duffin, Eichhorst, Lichtheim, Hurst, Senator, and others have either reported cases of embolism or thrombosis, or have contributed essays upon the subject.

The following case I saw, with Dr. C. D. Smith, of this city, in April, 1885: James D——, Irish, waiter, aged thirty-two, single. For several weeks previous to the present illness he had been out of employment, and for a month previous had been drinking freely; states that he had a chancre three years ago; family history unimportant. Upon April 9th he had used liquor, but went to bed that evening feeling as well as usual, and slept well through the night. Upon waking on the morning of the 10th he had lost the power of speech, was unable to swallow, and suffered pain in the region of the sternum. When walking he was dizzy, and staggered; complained of a ringing sound in his right ear; urine passed normally; bowels constipated. These constituted the symptoms upon the morning of the 10th, so far as they could be ascertained from the patient and his mother.

I saw the patient on the afternoon of the 10th. He was a short, "thick-set" man, with full face, which was somewhat flushed, and the eyes were injected, as is so common after hard drinking; pulse, 108, the calibre of the artery appearing small; temperature under tongue, $99\frac{5}{10}$° F.; heart and lungs normal; urine not examined at this time.

He walked slowly and somewhat hesitatingly, which was due to paresis of the lower extremities, and this was most marked upon the right side.

With eyes closed he could walk quite well, and could stand with his heels together without reeling. He was

able also to stand upon one foot, with eyes closed, but with much difficulty upon the right, owing to its weakened condition.

The power of flexion and extension of the leg upon the thigh was reduced upon both sides, the muscles of the right thigh being weaker than those of the left. Both upper extremities were paretic; but the degree to which muscular power was reduced was not accurately determined until a day or two later. The mind was clear, and had been since he awoke in the morning. He readily understood all that was said to him, and would try very hard to reply to questions; but the function of articulate speech was completely lost—aphonia paralytica. The patient was unable to swallow, the liquids flowing out of the mouth and into the larynx. Cough was thus excited, but not so readily as in health. I believe the laryngeal mucous membrane was anæsthetic. He could open his mouth about one-half the normal distance, but was unable to protrude the tongue, it remaining motionless in the floor of the mouth. The palatine arch was lessened, but symmetrical, and the mucous membrane covering it and the pharynx was anæsthetic. The facial nerve upon the right side was paretic, which was most marked in its lower fibres of distribution, the orbicularis oculi upon this side closing slowly, and the mouth was drawn somewhat to the left. The lower fibres of distribution of the left facial were paretic, but to a less degree than those of the right, the orbicularis oculi closing normally. The respirations were 22, slightly Cheyne-Stokes in character, and he would often gape, which would be full and prolonged. The pupils were somewhat dilated, contracting slowly to the light. Vision was not tested; but there was no complaint of its failure at the time, nor has there been since. There was a ringing sound in the right ear, and the hearing on this side was lessened.

The patient was put to bed and fed with milk by the stomach-tube. Bowels were opened with croton-oil, which was added to the milk. Milk was also given by the bowel, to which was added ext. ergot. and sod. brom.

April 16th.—Temperature, 98½°; pulse, 94; respirations, 16, at times stertorous. He still gapes a good deal, but somewhat less than for the past two days. The urine has been examined and found to contain neither albumen nor sugar. At this time the loss of muscular power in the forearms was more definitely noted. With the left hand he drove the needle of the dynamometer to 26°, and with the right to 20°. With my own hands I drive it to 110° with the right, and to 100° with the left. In persons in health whom I have tested I have found a difference of about ten degrees in the two hands. This patient was right-handed, and, while the muscular power was much reduced in both arms, that of the right showed a paretic condition greater than that of the left by 16°, assuming the above estimate as a standard.

The plantar reflexes were lessened. The left cremasteric was lessened, the right absent; abdominal absent; other (superficial) reflexes not tested; patellar-tendon reflexes exaggerated; left ulnar and radial reflexes present, right absent. Tactile sensibility: Right calf, 8°; left calf, 8°; back of right hand, 2°; back of left hand, $5\frac{8}{10}$°; right cheek, $1\frac{8}{10}$°; left, 7°. Sensibility to faradic current about normal; bladder normal; bowels constipated.

May 15th.—Improvement has been uninterrupted, so that now he can swallow quite well.

Says "ya" for yes, and while he can pronounce some words he cannot carry on conversation.

The paretic condition of the extremities has quite disappeared, the general sensibility has improved, and he can protrude the tongue a short distance.

June 15th.—Patient has walked across the city and visited his friends. The pharynx has nearly regained its function. He converses very well, though some words are pronounced indistinctly; can protrude tongue and purse his lips so as to whistle. The muscles supplied by the lower fibres of the facial have not regained their full power. Paresis of the right side has disappeared. I last saw this patient in July, *en route* to Boston to seek employment. His condition was much the same as in June. He promised to come and see me on his return. This man afterwards came to my office, December 21, 1885, and since the preceding was written, thus verifying his promise.

He tells me he has been running an elevator in a hotel in St. Louis, and has been well since he left here. He has gained in weight, and his general appearance is that of one in health. States that he has not used liquor. When conversing he speaks slowly, and some words are clipped, while the jaw is often drawn to the left. He says he cannot speak rapidly, "because the trouble seems to be in his lips and mouth," and one can see that the lips and tongue fail to perform the more delicate movements necessary to the distinct articulation of many words.

The tongue passes out of the mouth in a straight line. Previous to his sickness he was accustomed to sing a good deal, but now he cannot sing at all. He has no difficulty in swallowing if he exercises care, but if he eats hurriedly he gets choked. Examination shows palatine arch lessened on the right side, and while the levator palatine muscle contracts on the left side that upon the right side remains inactive.

He thinks he can talk better than when he went away in July, and feels much better generally. His mind has remained undisturbed. At times it troubles him to write, for "the letters all run together." Has no trouble with his hands in performing all ordinary duties. Tactile sensibility is about the same in both palms, and is about normal. Upon the back of the hands, right, 2°; left, 4°; dorsum of tongue, normal; right cheek, $1\frac{1}{2}$°; left cheek, $2\frac{2}{3}$°. With the right hand he drives the dynamometer to 65°; with the left to 58°. I can detect no difference in the muscular power of the thighs. The plantar reflexes are slightly exaggerated.

Patellar reflexes exaggerated, the left being more active than the right. When the tap is made upon the right tendon, a distinct contraction takes place in the muscles of the left thigh. No contraction takes place in the muscles of the right thigh when the left tendon is struck. Both radial reflexes normal, others not tested. Bowels constipated, and at times, when he tries to have them act they seem weak. If he laughs heartily, it is often difficult for him to retain his urine, and it will run away upon his clothing. At other times he has trouble to "start his water." States that he has lost all sexual desire, and could not have an erection if provocation presented. There is no evidence that trophic changes have occurred at any point.

In this case a disturbance occurred in the nervous centres, which was manifestly of a serious nature. Bulbar paralysis so pronounced, as well as being the most prominent feature in the case, can leave little or no doubt as to the seat of lesion. The attack having come on while the patient was asleep, it is uncertain to how great an extent the mental functions were disturbed; but I think it is fair to conclude, from the condition of the patient upon the 10th, and from the history of the case subsequently, that the cortical structures of the brain were at no time seriously disturbed. Assuming the lesion to have been in the medulla, its nature and exact seat is far more difficult to decide. The suddenness of the attack would lead one to consider that the lesion was either hemorrhagic or embolic. The age of the patient was against the supposition that it was hemorrhagic. In cases of hemorrhage [1] into the pons or medulla, the vessels, as a rule, are extensively atheromatous. Epileptoid convulsions [2] and apopletic attacks are of more frequent occurrence in cases of hemorrhage than in those of embolism or thrombosis. The prognosis in cases of hemorrhage is necessarily very grave. There is only hope [3] in cases of limited hemorrhage, or where the

[1] Browne, C.: Hemorrhage into Pons Varolii.
[2] Ziemssen: Ziemssen's Cyclopædia.
[3] Ross, J., second edition, vol. ii., page 167.

localization is very favorable, especially when it is far removed from the respiratory centre.

It is difficult to conceive of a hemorrhage which, while producing symptoms so pronounced, should cause no more serious disturbance of the functions of the vagus. Pressure of the effused blood upon the respiratory centre, beneath the floor of the fourth ventricle, is the immediate cause of death in these cases. While the functions of the vagus were interfered with, the disturbance was no more than we should look for in certain cases of embolism. Presuming the case to have been one of embolism, which of the vessels was occluded, and at what point did the obstruction occur?

This question cannot be answered satisfactorily in any given case, since it has been found that great variations take place in the distribution of the vessels to this part. Occlusion of the basilar [1] causes paralysis of all four extremities, and of both sides of the face, and usually a rapid death from asphyxia. An obstruction occurring at this point cannot be diagnosed from a hemorrhagic effusion. Obstruction of both vertebrals occasions symptoms similar to those in which the basilar is obstructed. Obstruction of one vertebral artery produces symptoms which assume, to some extent, the hemiplegic form. The lesion is more frequent in the left artery.

The hemiplegia may be on the same side as the lesion, or on the opposite side, depending upon the situation of the lesion, the point of origin of the anterior spinal artery, the completeness of the decussation of the anterior pyramids, and other circumstances. These symptoms may be upon both sides, but they are usually more pronounced upon the one side than upon the other.

Obliteration of the smaller branches of distribution in the medulla cannot be diagnosed during life. In the case above reported, I believe an embolic obstruction occurred in one of the vertebrals, but do not feel sure upon which side the lesion was situated. We read in Ross, second edition, vol. ii., p. 962, under an article upon "Syphlitic Periarteritis and Endarteritis:" "It would appear that distinct gummata may form in the walls of arteries, and either project from its external surface or into its lumen, and in the latter case may either obstruct the vessel completely or be washed off to be arrested as an embolus in one of the smaller branches."

It must be exceedingly rare for complete recovery to take place in these cases, since the arteries going to this part are so largely nutritive and form more or less definite vascular areas.

It is for this reason that secondary structural changes soon follow, which, in many cases, prove fatal. These changes are only averted when a free and prompt collateral circulation becomes established. In the present case it is hoped that a prolonged anti syphilitic treatment may restore the parts to a more healthy condition.

MORRHUOL.—The following is the method proposed by Chapoteant for extracting the active portion of cod-liver oil. The oil is first treated with a soda solution at a low temperature, in order to remove the free acids, and is then shaken up with ninety-per-cent. alcohol. It is then distilled, and the product is the active portion of the oil. Brown oil gives from 4.5 to 6 per cent., yellow from 2.5 to 3 per cent., and white from 1.5 to 2 per cent. of morrhuol. This is a nearly odorless fat, partially crystallized at ordinary temperatures, of a sharp, bitter, and aromatic taste. It is given in capsules of three minims each, corresponding to one and a quarter drachm of cod-liver oil. Children from six to eight years of age receive two, those from eight to twelve years, four, and adults, eight to ten, capsules daily. Lafage states that it may be given for a long time without exciting any digestive disturbances, and he recommends it in tuberculosis, chronic bronchitis, scrofula, and rachitis.—*Allgemeine Medicinische Central-Zeitung.*

[1] Ross, second edition, vol. ii., p. 137.

Progress of Medical Science.

THE OIL OF EUCALYPTUS IN MALARIAL AFFECTIONS.—In a paper read before the Philadelphia County Medical Society (*Therapeutic Gazette*, June 15, 1886), Dr. J. H. Musser gives the results obtained by the administration of eucalyptus oil in a number of cases of intermittent fever and other malarial affections, and formulates the following conclusions based upon his observations: 1. The oil of eucalyptus is of decided value in about thirty-three and one-third per cent. of all cases of intermitting malarial fever. 2. It has no specific value in any one type of the disease. 3. The longer the duration of the disease, the less liable is it to do good. 4. Relapses are not prevented by it. 5. Its influence on the spleen has not been demonstrated. 6. A dose of ten drops four times daily has been a sufficient dose, but five drops every three hours would be of greater value possibly. 7. Good results are not attained as quickly as by large doses of quinine, but a good effect should be observed within five days at least.

EPILEPSY FROM DISEASED TEETH.—The literature of epilepsy contains some fifteen cases in which this disease was cured by the extraction of one or more teeth, but in none of these cases is it proven that the disease of the teeth was the direct cause of the attacks. The following case, recorded by Schwartzkopf, is apparently conclusive in this regard: The patient, a man aged twenty-seven, suffered severe pain in the right upper middle incisor, which was filled soon after. Thereupon appeared a swelling on the adjacent portion of the hard palate, which increased in size until it reached the soft palate, in which, soon after, a fistulous opening appeared. Every morning the patient expelled, by pressure with his finger, the purulent contents of the swelling, and was thereafter comparatively free from pain. The tooth, however, was loose, and somewhat painful when in use. Ten days after it was filled an epileptic attack occurred, which was repeated after several months. Gradually the attacks became more frequent, and in eighteen months after the first attack they occurred several times a week. The fistula remained during this entire period, and the patient used, under medical advice, bromides, atropine, and other remedies without result. The tooth was then extracted, whereupon the fistula healed, and the epileptic attacks have not returned, although the extraction occurred four years ago.—*The Practitioner*, June, 1886.

A POINT OF DIAGNOSIS IN RÖTHELN.—The extreme infectiousness, notwithstanding the comparative harmlessness, of German measles makes it very desirable to find early indications of its presence. Dr. James G. Glover writes, in *The Lancet*, that he has been struck in two or three cases with the fact that the earliest symptom to excite the notice of the patient has been a swollen gland in the neck at the back of the sterno-mastoid muscle. One young lady consulted him about such a gland of a considerable size, and without any obvious explanation in its neighborhood. Four days later the rash of Rötheln appeared and explained the mystery, and the single gland had become the usual chain on both sides of the neck. When the disease is prevalent, or already exists in a family, and a swollen cervical gland in a young person appears without obvious reason, it may be suspected, the writer maintains, that the disease is already in the system. The occurrence of cervical glandular enlargements is, of course, one of the commonest and most interesting notes of this least pyrexial of the eruptive diseases, and the early appearance of the symptom coincidently with the rash, or even a day before, as Dr. Goodhart describes in one case, is also known. But its appearance four or five days before the eruption seems worth noting for diagnostic purposes.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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WHAT CONSTITUTES COUNTER-PRESCRIBING.

A CASE has recently transpired, bearing on the question of counter-prescribing, which is of considerable interest to medical men, as showing the difficulty of defining in law what actually constitutes medical practice on one hand, and the selling of drugs with a recommendation on the other. A firm of druggists were prosecuted by the Medical Society of the County of New York for prescribing without a license. The facts, as presented in the brief of Mr. W. A. Purrington, counsel for the Society, are in substance as follows:

A laboring man ran a splinter in his foot while at work and went to a druggist on Ninth Avenue for relief. The latter very properly sent him to a doctor for suitable advice and treatment. The patient went as directed, but the doctor being out of his office, patient returned to work and told a fellow-workman (Grimes) of his ill success, and the druggist's refusal to pull out the splinter; then Grimes told him of the defendants and said they were "good for that sort of thing." He went to their shop, saw one of the proprietors, and told him of his visit to the doctor, when the patient was ridiculed for going to the doctor for such a thing, and was informed that the firm were good enough doctors for that, and recited their success in treating an injured woman. The druggist examined the foot with a probe, "advised festering instead of cutting," and applied a salve, charging for the remedy. On Friday the patient called again and then saw another partner of the same firm, whom he told of the first visit, and asked him to extract the splinter. On examination, the latter pronounced it not ripe enough and advised the salve to be put on thicker. On Monday the patient again called. The splinter was then projecting one-eighth of an inch, and the same druggist pulled it out with his tweezers. The patient went home and took to bed. On Tuesday he sent his wife to defendants to get something to relieve his suffering.

The wife testified that she also saw the prescriber and operator, and asked him if he remembered the young man with the splinter, said he was suffering great pain, and asked for something to relieve him. The druggist gave her a wash with directions to apply it every half-hour, saying that her husband probably had erysipelas. On Wednesday she called in a regular physician to attend her husband.

It would appear, then, that the defendants had the case under their care for a week, beginning with the treatment of a wound and ending with the diagnosis of erysipelas.

The defendants met these charges by denying that they applied salve by their own hands or advised treatment.

They say that on every occasion they refused to do anything for the foot, except when one of the firm, observing Hughes' "agony," as he termed it, pulled out the splinter, but mercifully gave no advice. Also that they had no instruments in the shop. The patient only testifies to the use of some sort of a "prod or probe, and probes and tweezers are common instruments in almost every house, and of use also in surgery."

The operator is positive that he gave Mrs. Hughes no instructions as to the use of the wash, because he sold it on Saturday night, *when business was brisk and he had little time to talk!* His attention being carefully called to this, he is as positive about it as about any other thing. And yet it was on Tuesday that he sold it; and his brother testifies that on Friday he had visited the patient after seeing Dr. Hugart, the physician in attendance.

The defendants also testified that the patient *asked for "a salve or something,"* and that the patient's wife picked out from several lotions named the one she wanted.

We have given the facts, pro and con, with some detail, as they bear on many important questions affecting the validity of the present medical law.

Mr. Purrington, the learned counsel of the County Society, presented every possible aspect of the case under the law, argued it with ability and force, but seemingly to no purpose, as the defendants were acquitted, obviously on the grounds of conflicting testimony, but clearly against reasonable probabilities as to intentions against the statute.

The case carries a lesson with it regarding the difficulties in the way of convicting counter-prescribers under the present law. It was ably shown by Mr. Purrington that the defendants voluntarily and culpably assumed the responsibility of medical and surgical advisers, and acted accordingly. Although they received no fee for the same, it did not matter, as professional advice, alas! is often given without pay. But behind it all is shown the usual motives of indirect gain, by being able to sell a medicine which they could not otherwise do. The defendants ingenuously deny any intent of wrong, but rather a desire to be humane in helping the man rather than themselves. With the ordinary jury this counts for a great deal. Hence the verdict. If this case is to be a precedent, the necessity for a more stringent medical law requires no argument.

THE BRITISH MEDICAL ASSOCIATION AND OUR CABLE REPORT.

THE British Medical Association which met this week at Brighton, England, was largely attended, and, as will be seen by our cable despatches, was fully up to its usual standard of scientific work. The addresses were well received, particularly the one on medicine, by our distinguished countryman, Dr. John S. Billings. This address, which we have the pleasure of presenting in full to our readers, will speak for itself. The work in the various sections was of a practical character and will be duly given to our readers when we receive the details by mail.

News of the Week.

THE LONDON HOSPITAL SUNDAY FUND amounts this year to over one hundred and eighty thousand dollars, being $25,000 more than it was last year.

PROFESSOR BOUCHARD has been elected member of the Académie de Médecine.

THE PREVENTION OF POST-SCARLATINAL NEPHRITIS is surely accomplished, according to Professor Jaccoud, by placing the patient on a milk diet from the beginning of the disease, and avoiding cold baths.

ENFORCING THE MEDICAL PRACTICE ACT IN MISSOURI.—The Missouri State Board of Health, following the example of that of Illinois, has passed the following resolution:

Resolved, That in future a percentage of graduates to matriculates of forty-five (45) or over will be grounds for refusal of registration of diploma and issuing of certificates to graduates of a school otherwise in good standing; provided, however, that before such action be taken, the said school, whose diploma is presented for registration, be notified, and an opportunity be given the faculty thereof for satisfactory explanation to the State Board of Health.

DEATH DUE TO THE INHALATION OF NITRIC ACID FUMES.—Dr. J. W. Stickler, of Orange, N. J., sends us the following interesting account: "Mr. Sinclair, of New Zealand, sent me an account of a very distressing disaster which occurred on board of the Manopouri. It seems that there had been put into the hold of the vessel a case of nitric acid. One of the bottles being broken, the acid escaped, filling the hold with its corroding fumes. Upon one of the hatches being removed the ship was thought to be on fire, and the hold therefore was deluged with water. The men who went below, however, discovered that what was regarded as smoke was in reality a far more irritating substance (nitric acid fumes), although at the time it did not cause a decided burning sensation in the throat or lungs. Within a few hours the men who had been thus exposed began to complain of serious illness, and in a very short time died. Three men sacrificed their lives in this manner. This sad accident is cited to call attention to the fatal consequence of carelessness in the stowage on shipboard of acids, the fumes of which are powerful enough to destroy life when introduced into the lungs by inhalation. In this instance there was gross carelessness on the part of the shippers in not properly marking the case containing the acid. It appears that this practice of shipping dangerous goods without notice of their character (so as to save cost) is a very common one, and the only wonder is that more accidents do not result from it. This sad accident also indicates the rapidity with which the fumes of nitric acid may destroy life when brought into contact with the pulmonary tissue, even when the symptoms immediately following its inhalation do not point to a fatal issue, as was the case in the instance above quoted.

THE MICHIGAN STATE MEDICAL SOCIETY has donated $500 to the treasurer of the International Medical Congress.

RICHMOND COUNTY (N. Y.) MEDICAL SOCIETY.—At the annual meeting of the Richmond County Medical Society, the following officers were elected for the ensuing year: President, F. U. Johnstone, of New Brighton; Vice-President, Rudolph Mautner, of Stapleton; Secretary-Treasurer, J. Walter Wood, of Port Richmond.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—This Association, at its last meeting, did two things—one of which was very creditable; the other not quite so much so. It elected the editor of the *Weekly Medical Review* its president, and it adopted the American Association's code of ethics. We are informed that it was understood, at the time of its organization, that the Association would attend only to scientific work, and not introduce the subject of medical ethics or medical politics. The results of its change of policy have already been the withdrawal of some members and the development of a quarrel.

NEURO-RHEUMA is the name Dr. W. Hale White wishes to be applied to nervous energy. It means "that which flows along a nerve."

THE INTERNATIONAL MEDICAL CONGRESS.—*The Lancet* has an editorial annotation pleasantly urging that European physicians make a strong effort to visit the Congress next year.

Obituary.

FRANK HASTINGS HAMILTON, M.D., LL.D.,

NEW YORK.

FOR the past two years Dr. Hamilton was suffering from pulmonary phthisis. Although feeble for most of that period, he did not become seriously ill until two weeks ago, when his progressive exhaustion terminated his valuable and useful life on Wednesday, August 11th, at his residence in this city.

Dr. Hamilton was born in the little town of Wilmington, Vt., on September 10, 1813. When still a boy he entered the Medical Department of the University of Pennsylvania, from which he was graduated when he was only twenty years old. After his graduation he went back to his Vermont home for a time, but his ambition sought a wider field, and he made his way to Auburn, N. Y., where he settled down to practice. In a very short time he obtained a widespread reputation as an able young surgeon, and five years after he left college he was appointed Professor of Surgery in the Fairfield (N. Y.) Medical School. This place, for some reason of his own, he did not like, and embracing an opportunity offered a year later, he accepted a similar Professorship at the Geneva (N. Y.) Medical College. Here he remained for nearly four years, when, his ambition again getting the better of him, he gave up his chair and went to Buffalo to resume his practice as a surgeon.

It was in Buffalo that Dr. Hamilton met the late Dr. Austin Flint, and the two thereafter became friends for life. In 1846 they, associated with Dr. James Platt White, also of Buffalo, added to the University of Buffalo a medical department, which rapidly became one of the features of the institution. Dr. Hamilton became its Professor of Surgery. For fourteen years, from 1846 to 1860, he retained his position in the university, and then moved to Brooklyn. Hardly had he got fairly settled in his new home and become the first Professor of Surgery that the Long Island Hospital ever had, when he entered the army as surgeon,

and early in 1861 he was attached to the Thirty-first New York Regiment. He was successively promoted to the grade of Brigade Surgeon—the latter after the battle of Bull Run—Corps Surgeon under General Keyes, in 1862, and Medical Inspector of the United States Army, in 1863. Dr. Hamilton was one of the founders of Bellevue Hospital Medical College, and held its chair of surgery until 1875, when he resigned. He has been living and practising in this city since 1864.

Dr. Hamilton distinguished himself not only as a skilful surgeon, but as a prolific and leading writer on surgical subjects. His famous "Treatise on Fractures and Dislocations," published first in 1860, is justly regarded as the best book on that subject in existence. It has now run through seven editions, and has been translated into French and German. Among his other widely known works are "Prognosis in Fractures," "Treatise on Military Surgery," "Treatise on the Principles and Practice of Surgery," and "New Views on Provisional Callus." The book which Dr. Hamilton regarded with the greatest pride was his "Treatise on the Principles and Practice of Surgery," published in 1872 (the third edition was published a few weeks ago). After he had finished it he remarked one day to his daughter, "Well, now my life is completed."

Dr. Hamilton was also an inventor, and his work in this field has aided surgery very much. Among his inventions are a "bone drill" and an apparatus for broken jaws, and he invented or improved the apparatus for almost every fracture of long bones. One of the doctor's greatest achievements was the introducing of gutta-percha as a splint where irregular joint surfaces require support. He was the first to use gutta-percha as an "interdental splint," and in many practices, which other physicians have since adopted, he was the first to lead. He was a bold and original thinker, firm in his convictions and logical in his conclusions.

When President Garfield was shot, in July, 1881, Dr. Hamilton was honored as one of the consulting surgeons with Dr. Bliss. Until the President died, he, in connection with Drs. Bliss and Agnew, was almost constantly in attendance.

He was twice married—to Mary Virginia McMurran, of Virginia, in 1834, and to Mary Hart, of Oswego, in 1840. His last wife died just a year ago. He leaves two children—Colonel Theodore B. Hamilton and Mrs. Daniel Davis. His body will be privately interred in Sleepy Hollow this (Saturday) morning.

Dr. Hamilton, at the time of his death, held many positions. He was visiting and afterward consulting surgeon to Bellevue Hospital, consulting surgeon to St. Elizabeth's Hospital, to the Hospital for the Ruptured and Crippled, and to various city dispensaries. He was President of the Medical Society of the State of New York, President of the Medico-Legal Society, President of the Pathological Society, and member of many medical societies in New York City.

Reviews and Notices.

THE GENUINE WORKS OF HIPPOCRATES. Translated from the Greek, with a Preliminary Discourse and Annotations, by FRANCIS ADAMS, LL.D., Surgeon. In two volumes. Vol. I. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

THE learned and scholarly translator of the works of Hippocrates characterizes that author as "the highest exemplar of professional excellence which the world has ever seen." It is most fortunate that the profession of to-day is able, through the scholarship of Dr. Adams, to learn of the life and writings of this man. Dr. Adams' translation was made for the Sydenham Society, and it contains not only the translation of the genuine works but a preliminary account of Grecian medicine, of the life of Hippocrates, of the physical philosophy of the ancients, and critical notes and explanations of the writings of Hippocrates. A study of the volumes cannot fail, therefore, to instruct and broaden the physician who reads them. The book should be constantly read; it is the Book of Genesis of the medical Bible.

THE PRINCIPLES AND PRACTICE OF SURGERY. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., late Professor of the Practice of Surgery, with Operations, and of Clinical Surgery, in Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital; to the Bureau of Surgical and Medical Relief for the Out-door Poor at Bellevue Hospital; to St. Elizabeth's Hospital, and to the Hospital for the Ruptured and Crippled; Fellow of the New York Academy of Medicine, etc. Third edition. Revised and corrected. New York: William Wood & Co. 1886.

THE appearance of the third edition of the late Dr. Hamilton's excellent treatise will be welcomed by many, not only of his former students, but also of others who were denied the privilege of hearing him in their student days, but who knew him by his writings. The interval of time which has elapsed since the second edition of this work was issued has been one fruitful in progress in surgery, and these advances have necessitated many changes and additions in order to bring the book up to the times. These alterations have, with one or two exceptions, been made in a satisfactory manner. As the author took pains to state, the work is in no sense an encyclopædia of surgery, but rather a concise text-book for students, dealing with all the subjects belonging properly and exclusively to surgery, and hence the reader must not expect to find any exhaustive presentation of the history or literature of surgical procedures or theories. We find little mention made of tuberculosis of bones or joints, and one who would turn to this book for instruction in antiseptic methods would be disappointed. The author was no partisan of the parasitic theory of disease, and apparently regarding antiseptic precautions, as practised almost universally in our day, of but little utility, he has dismissed their consideration with few words. But these are matters which, even yet, we venture to say, cannot be regarded as settled beyond the shadow of a doubt, and hence each one is at liberty to hold to his own opinions, even though he be in the minority. For those who desire to learn the views of one of the greatest of the conservative surgeons of the present day we can recommend no better work than the one before us.

HISTORY OF HOMŒOPATHY: ITS ORIGIN; ITS CONFLICTS. With an Appendix on the Present State of University Medicine. By WILHELM AMEKE, M.D., of Berlin. Translated by ALFRED E. DRYSDALE, M.B., of Cannes. Edited by R. E. DUDGEON, M.D. 8vo, pp. 445. London: Published for the British Homœopathic Society, by E. Gould & Son. 1885.

THIS work is an apology for homœopathy, and an attack upon "allopathy," so called. It is not a very good book looked at from a historical, or literary, or scientific stand-point. A great deal of indignant rhetoric is displayed over the persecutions of homœopathists, and we find much of just but oft-repeated criticisms on the fashions of therapeutics. What, as physicians, we should like to find in such a work as this would be a candid statement of what homœopathy has been, and what it really is at present, and also some demonstrations of its efficacy as a mode of treatment. Instead of this we only find tirades and eulogiums, which will please the confirmed adherents of homœopathy, but which can have no effect but weariness on other persons. As the spiritualist sits down to his *Banner of Light*, so the homœopathist can sit down to this work, sure of finding nothing but what will confirm his faith and make him wonder at the obstinacy and dulness of the skeptical world outside.

HANDBOOK OF PRACTICAL MEDICINE. By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic at Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. One hundred and three wood-engravings. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

EVER since Niemeyer achieved such popularity in this country German works on general medicine have been received with interest and attention. The present work, though coming from Switzerland, is essentially German in its method and thoroughness, and we feel sure that it will be well appreciated here. Its author is widely known for his contributions to pathology, and the translation into English of this, his greatest work, should be a matter of congratulation.

The author's therapeutic suggestions will prove particularly interesting. The book is copiously illustrated, and is printed in the usual excellent style of the Standard Library.

JAHRESBERICHTE ÜBER DIE FORTSCHRITTE DER ANATOMIE UND PHYSIOLOGIE. Herausgegeben von DR. FR. HOFFMANN und DR. G. SCHWALBE. Dreizehnter Band. Literatur, 1884. II. Abtheilung, Physiologie mit Generalregister zu Band I.–X. Leipzig: F. C. W. Vogel. 1886.

THIS substantial volume of four hundred and eighty pages, besides the general index of ten volumes, presents a concise yet thorough review of the work done in physiology in 1884. Such books as these are extremely helpful to all interested in this special branch of the medical sciences.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

(DIRECT CABLE TO THE MEDICAL RECORD.)

TUESDAY, AUGUST 10, 1886—FIRST DAY.

President: W. T. EDWARDS, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: WITHERS MOORE, M.D., F.R.C.P., Senior Physician to Sussex County Hospital, Brighton.

The fifty-fourth annual meeting of the British Medical Association was held at Brighton, and was called to order by the President, DR. W. T. EDWARDS, at 3 P.M., and after a reception of the Council of the Association by the Mayor of Brighton.

The minutes of the last meeting were adopted as read.

DR. EDWARDS, in a brief address thanking the members for the honor conferred on him as the recipient of the high office, and expressing gratification at the good work done by the Society during the past year, introduced the President-elect, DR. WITHERS MOORE, of Brighton.

DR. MOORE took the chair, and followed with an address of welcome to those present, expressing the hope that the meeting would be an enjoyable and profitable one to all concerned.

A vote of thanks was proposed by DR. EDWARD WATER, and seconded by DR. EDWARDS CHADWICK. Carried.

DR. BALTHAZAR FOSTER, President of the Council, moved that the report of Council and financial statement of the Association be adopted. After being seconded by DR. CARTER, of Liverpool, it was carried.

A lengthy discussion then ensued in regard to the admission of new members to the General Medical Council, which resulted in a necessary change in the by-laws.

MR. JOHN DIX submitted a proposition in reference to the payment of travelling expenses of the representatives of branches to the meetings of the Council, and recommended that the present by-law on the subject be not altered.

Quite an acrimonious debate ensued, which was only terminated by referring the matter to the Council. The meeting then adjourned until evening.

DR. BALTHAZAR FOSTER, at the beginning of the evening session, introduced DR. N. S. DAVIS, of Chicago, a delegate to the Association, and President of the International Medical Congress.

DR. DAVIS responded in a few appropriate remarks, after which the President, DR. WITHERS MOORE, delivered his

ADDRESS: THE RELATION OF PRACTITIONERS TO CONSULTANTS.

After some remarks upon the progress made in the general cultivation of the medical sciences, and the necessity of developing the special departments of practice, he considered, in some detail, the relations of practitioners to consultants. The latter were generally well understood. The object of counsel was mainly the division of responsibility in regard to the management of the case, and both family attendant and consultant should act in unison, with the sole purpose of benefiting the patient. Each party to the consultation had his respective duty to perform, and the line was so sharply drawn by custom that there was no real danger of transcending privileges on one side or the other. When the proper relations were maintained, upon the platform of gentlemanly behavior toward each other, the convictions of the patient and his friends were proportionately strengthened in the estimate of medicine as a science, and in renewed confidence in therapeutical resources.

THE HIGHER EDUCATION OF WOMEN

was his next topic. While on general principles higher education was always desirable, its application to women had comparatively narrow limits. It was not impossible, but its results were not desirable. Women were made for wives and mothers, and in their respective spheres could not be improved by a cultivation of intellectual power at the expense of the finer sympathies of their natures. Physically speaking they were unfitted for the extra strain, and their health, as a rule, suffered accordingly. He believed in Herbert Spencer's maxim, that a strong nation must consist of good animals. Strong and healthy women were of more importance to the rising generation than sickly intellectual female prodigies. Even if health was not broken down, if family duties were not interfered with, if wifely sympathies were not sacrificed, it remained yet to be demonstrated that woman in her so-called higher sphere was a necessary or

useful factor in the body politic. Society needed her help in other directions, and was jealous of her prerogative. In this connection he referred to the overpressure in female seminaries, and the consequent ruination of the constitution at a time when proper rest for the brain and nervous system was a primary consideration. He appropriately concluded his address by quoting from the tenth to the twentieth verse of the last chapter of Proverbs.

DR. N. S. DAVIS in proposing a vote of thanks to the speaker remarked upon the influence of the high intellectual cultivation of American women. He believed that woman was abundantly able to occupy her own sphere. She was specially created for it, and should be satisfied with the exercise of these high and noble functions. When she attempted to go beyond them she must necessarily be a failure. She could no more compete with man in his sphere than could man in hers.

The motion was seconded by MR. QUAIN, who was proud to own that he was a friend of the President of forty years' standing.

MR. MARSHALL introduced a motion to the effect that the *British Medical Journal* should be considered the absolute property of the Association. This gave rise to a discussion bearing upon the methods of management of the journal, which was participated in by Dr. Balthazar Foster, Mr. Wheelhouse, and others, ending in a reference of the matter to the Council.

The meeting then adjourned until Wednesday.

WEDNESDAY, AUGUST 11, 1886—SECOND DAY.

The Association was called to order by SIR BALTHAZAR FOSTER, President *pro tem.*

ADDRESS IN MEDICINE.

After the transaction of some miscellaneous business, DR. JOHN S. BILLINGS, of Washington, D. C., delivered the address in medicine (see p. 170). The address was well received, and at its conclusion a vote of thanks was tendered by SIR THOMAS CRAWFORD. A discussion then followed bearing upon the election of members to the General Medical Council. It was finally decided by vote that the Association should not interfere in the premises.

MEETINGS OF SECTIONS.

The Sections on Medicine, Surgery, and Obstetrics, Therapeutics, and Otology convened this (Wednesday) afternoon.

THE SECTION ON MEDICINE

was presided over by DR. W. H. BROADBENT. SIR ANDREW CLARK introduced the subject for discussion, viz.:

CASES IN WHICH DISEASE OF THE VALVES OF THE HEART HAS BEEN KNOWN TO EXIST FOR UPWARD OF FIVE YEARS WITHOUT CAUSING SERIOUS SYMPTOMS.

He referred to several striking examples of such a condition, in which obstructive and regurgitative troubles were so well balanced by compensatory hypertrophy that the patients were in comparatively good health and many of them able to attend to exacting and arduous duties.

The subject was also discussed by Drs. S. Bristowe, Clifford Allbutt, D. J. Leech, and Bowles.

DR. W. S. PLAYFAIR next read a paper on

SOME OBSERVATIONS ON WHAT IS CALLED NEURASTHENIA.

This was discussed by Drs. Hughlings Jackson and C. R. Drysdale.

THE SECTION ON SURGERY

was addressed, Wednesday afternoon, by its President, JOHN ERIC ERICHSEN, after which SIR HENRY THOMPSON opened a discussion on

SUPRAPUBIC LITHOTOMY,

and was followed by Messrs. Reginald Harrison, of Liverpool, W. Cadge, T. R. Jessop, Barwell, Cousins, Surgeon-Major Kegan, Sir William MacCormac, Jacobson, Bruce, Clarke, and Hingston, of Canada.

THE SECTION ON OBSTETRICS

was called to order by the President, DR. ALFRED MEADOWS, of London, who delivered an address.

DR. ROBERT BARNES, of London, introduced the subject

THE ALTERNATIVES TO CRANIOTOMY,

and was followed in the discussion by Drs. Madden, Neville, Alderson, Cameron, Thompson, Hough, Edis, Wright, Wilson, W. T. Lusk (New York), Galway, and Swaine.

DR. T. ADDIS EMMET, of New York, read a paper entitled

CERTAIN MOOTED POINTS IN GYNECOLOGY,

after which DR. GRAILY HEWITT gave the early history and etiology of uterine flexions and displacements. The latter was discussed by Drs. Bantock and Gordon.

SECTION ON THERAPEUTICS.

DR. THOMAS LAUDER BRUNTON, of London, the President of the Therapeutical Section, addressed the latter at its opening session, after which PROFESSOR LEIBRICH, of Berlin, read a paper on a new fatty substance (lanolin), detailing its physical properties and therapeutical uses.

DR. JOHN V. SHOEMAKER, of Philadelphia, presented a paper on "Hamamelis Virginica," and DR. E. MACKEY one on "Resorcin in Gastric and Cutaneous Disorders."

DR. CARTER, of Liverpool, then opened the discussion on

ANTIPYRETICS,

and was followed by Dr. Leech, and others.

SECTION ON OTOLOGY.

Before the Section on Otology the following papers were read: "On Examination of Nasal Cavities from the Front," by MR. E. C. BABER; "The Functions of the Nose in Health and Disease," by DR. GREVILLE MACDONALD. Discussions on these papers were participated in by Drs. Erskine, Ellis, Baber, Grant, and Messrs. Spencer Watson and Lennox Browne.

After the adjournment of the sections, a garden party was given to the members by Sir Julian Goldsmid at St. Ann's Wells. This was numerously attended, as was also the conversazione in the evening, tendered by the President of the Association and the Southeastern Branch.

(To be continued.)

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-second Annual Meeting, held at the Pequot House, New London, Conn., July 21 and 22, 1886.

(Continued from p. 163.)

WEDNESDAY, JULY 21ST—FIRST DAY—EVENING SESSION.

THE meeting was called to order by the President, DR. WILLIAM F. NORRIS, of Philadelphia.

DR. J. A. ANDREWS, of New York, read a paper on

THE EFFECT OF THE ELECTRIC LIGHT UPON THE EYE.

The injurious effects of various forms of light upon the eye were first considered, and numerous instances cited showing the harmful effect of exposure of the eyes to bright sun-light, bright lamp-light, etc. Cases were given in which a short exposure to the arc-light was followed by swelling of the lids and conjunctivæ.

The electric light gives the maximum of light with the minimum of heat. So far, the only cases of injury to the eye from the electric light have resulted from exposure in close proximity to the intense light of the arc-light. The effect in these cases can be best explained as occurring through the sympathetic nervous system rather than as the result of mechanical or chemical influences. It is not established that exposure to bright light can produce a diffused iritis. No case of injury to the eye from the incandescent light has been reported. The incandescent light possesses advantages which are wanting in other forms of artificial light, the principal of which are its steadiness and the fact that its use does not contaminate the atmosphere. (The paper will be published in full in a future issue.)

DR. C. R. AGNEW, of New York, remarked that the incandescent electric light had been introduced into Columbia College reading-room, and that all who had made use of it have expressed great satisfaction with it.

DR. W. F. MITTENDORF, of New York, said that the conclusions of Dr. Andrews confirmed the results of his observations. The light is so perfect that it need not be approached close to the eye, and the efforts of accommodation are lessened. On account of its steadiness less work is thrown upon the iris than with the flickering light of the gas.

DR. WILLIAM S. LITTLE, of Philadelphia, described

A METHOD OF OVERCOMING DIPLOPIA WHEN PRISMS ARE NOT FULLY EFFECTIVE.

Double vision, especially in the lower field, is a source of danger in walking. This is the case even where prisms are worn, as the patient, by not holding the head forward, may look under the spectacle and thus see double. In order to prevent looking under the glass and seeing double in the lower field, the speaker had, in a case which he related, resorted to the following procedure. The sphero-cylinder correcting the diplopia of the right eye has been ground opaque for one-sixteenth of an inch above the horizontal plane, so as to obliterate sight in the lower field of vision in this eye. Then there has been attached to the lower portion of the frame the wire network used in protection glasses. This is carefully adjusted to fit close to the face, the perforations in the gauze having been stopped by painting. Vision is thus cut off below and under the spectacle. In this way, vision for the affected eye is only through the upper part of the myopic correction, and the necessity for a prism is done away with.

DR. W. F. MITTENDORF, of New York, read a paper on

TWO EPIDEMICS OF MOLLUSCUM CONTAGIOSUM.

The contagiousness of this affection has been a matter of much dispute. The two epidemics which had come under his notice had occurred in asylums for children. In the spring of 1885, a little girl having one or two small warts on the eyelid was admitted to one of these institutions. In a few weeks other children exhibited similar growths on the eyelids, in some cases spreading to the lips and to the nose. Within three months after the admission of the first case, twenty-seven children were more or less disfigured by this affection.

In the second institution as many as forty children were affected at one time.

As soon as attention was called to the condition, energetic treatment did away with it. Excision with scissors and touching the base with nitrate of silver proved most satisfactory. Unless excision is employed, the disease is apt to return.

DR. W. F. MITTENDORF, of New York, described a case of

MELANO-SARCOMA OF THE CONJUNCTIVA AND CORNEA.

The patient came under observation August 22, 1884. In April of that year a black spot appeared upon the lower part of the conjunctiva and was removed. When she came under observation two other tumors had appeared. They were about the size and shape of cucumber-seeds. Two or three spots, looking as though ink had been dropped on the eyeball, were also noted. The tumors were movable, and the conjunctiva surrounding them slightly congested. Otherwise the eyeball was normal and vision almost perfect. The growths did not affect the left eye, which was highly astigmatic. The patient was a strong, hearty woman, forty-six years of age, with no appearance of cachexia. There had been no injury to the eye, and the family history was good. The pre-aural glands and those of the neck were not enlarged. The tumors were removed and the wound in the conjunctiva brought together with sutures. Healing took place rapidly.

Four months later she returned with two growths starting from the lower portion and the outer canthus of the same eye. There was also a small flat growth on the cornea, not connected with the tumors. The tumors were again removed, and the patient returned to her home.

In the spring of 1886 she again made her appearance, with a small tumor the size of a cherry, which had developed at the seat of the former growths. The tumor, with a portion of the conjunctiva, was removed. A pre-aural gland and some glands in the neck were found slightly enlarged. The general health remained good.

Four or five weeks ago she again returned with another growth. The eyelids could not be separated. An incision was made, and the tumor removed.

Microscopical examination showed the growth to be a melano-sarcoma due to hemorrhage in the parenchyma. Pigment granules were also present.

DR. H. D. NOYES, of New York: In a case of melanotic sarcoma on which I operated some years ago, the disease has not returned.

DR. H. KNAPP, of New York, had operated on a number of these cases, but they have all, after a variable period, relapsed.

DR. B. E. FRYER, of Kansas City, read a paper on

THE USE OF HOT WATER IN SOME OF THE CORNEAL AND CONJUNCTIVAL INFLAMMATIONS.

The water should not be of a lower temperature than 140°, and as much higher as the patient can stand it. It may be used by fomentation applied to the closed eyelids. This is continued for half an hour at a time, and repeated every one, two, or three hours, day and night. It may also be applied by suspending a vessel above the patient, and allowing the water to escape through a tube, thus keeping up a continuous action of the hot water. In some cases the temperature may be raised almost to the boiling point. In some cases of purulent ophthalmia the hot water may be thrown into the conjunctival sac.

In purulent conjunctivitis this application cuts short the attack more quickly and safely than the use of ice-cold

water. In gonorrhœal ophthalmia it quickly lessens the swelling, and diminishes the occurrence of ulceration of the cornea. If ulceration has commenced it is less likely to progress, and the amount of cicatricial tissue is lessened. In catarrhal conjunctivitis and phlyctenular ophthalmia it is a good adjuvant. In acute and chronic keratitis it is useful. Its most marked effects are seen in corneal ulcer. The small amount of opaque tissue left is astonishing. The pain and photophobia are also diminished by the hot water.

Dr. William F. Norris, of Philadelphia, read a paper on

ASTHENOPIA AND THE CHANGES IN REFRACTION IN ADOLESCENT AND ADULT EYES.

The speaker first referred to the changes occurring in the shape of the eyeball at various periods of life. It is regarded by some as not necessary to correct slight errors of refraction, but the author considered their correction as of great importance when they produce asthenopia. By removing the trouble the congestion and softening of the eye is removed, and the lengthening of its visual axis is prevented. This congestion and softening were regarded as important factors in the production of astigmatism and conical cornea.

A number of cases of diminishing hypermetropia and of hypermetropia passing into myopia were described. Diminishing hypermetropia and increasing myopia are simply different stages in a process essentially the same. They are both the result of softening of the eyeball and slow distention in the direction of the visual axis. Careful correction under a mydriator in these cases is one of the best means of preventing their further progress. The enforced rest of the eye thus obtained is an important aid in diminishing the congestion.

Dr. E. Gruening, of New York, referred to an interesting group of cases in which the patient, on arising, has pain in the eyes, with photophobia, passing off in an hour or two. He was not able to fix on any object for any length of time. There is also lachrymation. These symptoms are usually associated evidence of nasal disease. All the affections due to nasal irritation are increased by the recumbent position, for this favors congestion of the erectile tissue of the nose. He has treated these patients by removing the nasal trouble, and in a series of two hundred cases, one hundred and fifty have been benefited, while the remaining fifty have passed from observation.

The meeting then adjourned.

Thursday, July 22d—Second Day—Morning Session.

The meeting was called to order at ten o'clock.

Dr. S. Theobald, of Baltimore, read a paper entitled

THE AMBLYOPIA OF SQUINTING EYES: IS IT A DETERMINING CAUSE OR A CONSEQUENCE OF THE SQUINT?

He criticised the view that the amblyopia exhibited by squinting eyes is a congenital defect, and argued in favor of the older view that the amblyopia is secondary to the squint and due to the mental suppression of the visual image formed in the squinting eye. He stated, in the first place, that it is a mistake to call this variety of amblyopia "amblyopia exanopsia," as the amblyopia is not due simply to want of use of the squinting eye, but to an active cerebral process which induces a much more rapid loss of vision. Schweigger and Alfred Graefe believe that squint is often due to a non-establishment after birth of retinal identity. If this were the case, as there would be, from the first, no stimulus to binocular fixation, the squint ought to develop in early infancy, whereas it is rarely met with then, but usually makes its appearance about the fourth or fifth year. They both also lay stress upon the fact that some squinting eyes (even when there is no alteration) retain good vision for years, while others, which have squinted but a short time, are highly amblyopic. These observations, however, do not conflict with the suppression theory, for, as the amblyopia doubtless develops during the forming stage of the squint, it is reasonable to suppose that, in some cases, it will have reached a high grade by the time the squint is fully established; while, on the other hand, a marked difference in the refraction of the two eyes (because then the diplopia will be less annoying) will explain the retention of vision in the squinting eye.

The most convincing argument, however, in favor of the suppression theory is that the peculiar regional characteristics which the amblyopia exhibits are of just such a nature as we should anticipate if this hypothesis be the correct one, but entirely inexplicable if we suppose the amblyopia to be a congenital defect.

Dr. H. D. Noyes, of New York, did not accept the conclusions presented in this paper. His objections were based upon an experience and careful observation for a number of years. It had been claimed that before the development of the squint such patients have had binocular vision. There is no proof of this, and the evidence is against it. Again, he had the records of a large number of cases of monocular amblyopia, presumably of congenital origin, without lesion demonstrable by the ophthalmoscope, which had had no squint, although there may or may not have heen hypermetropia. Binocular fixation after operation is not infrequent, but, according to his experience, binocular vision is obtained in only one-fifth of the cases. It is rare to find material improvement in an amblyopic eye after operation.

Dr. O. F. Wadsworth, of Boston, agreed with what Dr. Noyes had said. Ten years ago he convinced himself that the amblyopia of squinting eye was not due to disuse. He thought that after operation there is no decided improvement in vision. He had never been able to increase the vision to any extent after operation.

Dr. George C. Harlan, of Philadelphia, said that he had at times attempted to compel the patient to use the affected eye, by keeping the fixing eye under the influence of atropia for a long time, and in some cases he had succeeded in improving the vision in the amblyopic eye.

Dr. W. F. Mittendorf, of New York, said that, while in those cases where there is a central scotoma we cannot expect any improvement from an operation, yet there are cases in which vision is at once improved. He thought that this was to be explained by the removal of the undue pressure exerted by the internal and external recti muscles, which is different from that exerted by the superior and inferior recti. Taking away this pressure puts the eye in a more favorable condition, and we should expect better vision.

Dr. B. Alexander Randall, of Philadephia, reported

TWO CASES OF SEVERE TRAUMATISM OF THE EYE, WITH PARTIAL DISLOCATION OF THE LESSER CRYSTALLINE LENS.

In the first case there were three points of rupture of the sclera. The upper half of the lens was in the anterior chamber, in front of the iris, the lower half, apparently, being in nearly the normal position. The lens receded under rest in bed and other appropriate measures. The scleral rupture healed, and vision increased to about one-thirtieth of the normal. The injured eye shows little tendency to grow worse, although the lens is still luxated backward.

In the second patient, a boy aged twelve, the lens was less markedly luxated, but the ophthalmoscope showed two rents in the choroid, the larger a little outside of the macular region, the other close to the temporal margin of the optic disk. The case progressed to an excellent recovery. The appearances of the eye-ground were illustrated by colored sketches.

Dr. J. S. Prout, of Brooklyn, read a paper on

BADAL'S OPERATION—LACERATION OF THE INFRA-TROCHLEAR NERVE FOR THE RELIEF OF GLAUCOMA, ETC., WITH CASES.

In 1882–83, Badal, of Bordeaux, proposed the laceration of the infra-trochlear nerve for the relief of glaucoma accompanied by pain. He selected this nerve because it is the direct extension of that branch of the ophthalmic, the nasal, from which the eyeball received its nervous supply. It emerges from the orbit just below the insertion of the pulley of the superior oblique muscle. It is readily reached by an incision along the margin of the orbit running from the pulley to the upper margin of the tendon of the orbicularis muscle. It is small, soft, and not easily recognized. It is to be stretched and torn by pulling directly forward. The *rationale* of the operation is not explained.

In severe cases, when a short delay may be fatal to the eye, Badal advises that the operation be combined with evacuation of the aqueous humor.

Dr. Prout had performed the operation nine times on five patients, which he reported. All were unpromising cases. In one there was for a time decided improvement of vision; in one there was temporary relief from moderate, and one from severe, pain. One was a case of glaucoma simplex, operated on without benefit; another a case of hemorrhagic glaucoma, not benefited. Others have reported much better results.

Dr. Prout drew the following conclusions: The operation has been shown to deserve further trial, especially in cases unfit for operations on the eyeball. It cannot make matters worse as to the eyes. Relief of pain, even if only temporary, is worth procuring at the cost of so slight an operation. It is important that cases be recorded, so that its value may be ascertained.

Dr. C. S. Bull, of New York, stated that where he had performed the operation for the relief of pain in glaucoma or ciliary neuralgia, while the relief was marked immediately after the operation, it was temporary only, and in every case returned.

Dr. H. Knapp, of New York, read a paper on

ADVANCEMENT OF TENON'S CAPSULE IN STRABISMUS.

The operation is performed by De Wecker in the following manner: A piece of conjunctiva, five millimetres long and ten millimetres high, is detached from the region of the insertion of the tendon, leaving a small band near the cornea. Tenon's capsule is now incised near the insertion of the tendon, and loosened alongside of and under the muscle. The capsule is then stitched forward by two sutures, entering through the conjunctiva to the capsule at the lower and upper edges of the muscle, and coming out in the conjunctiva above and below the cornea.

Dr. Knapp, during the last few months, had done the operation ten times. His operation differed from that above described in leaving a broader conjunctival flap and in using a third middle suture. The operation was performed in two cases of convergent strabismus due to paralysis of the external rectus, two cases in which former tenotomies had not overcome the difficulty, and in six cases of convergent strabismus of high degree, with considerable amblyopia. The results have all been quite good.

In none of the cases has there been any alarming reaction. Antiseptic precautions have been employed in all cases. The speaker preferred advancement of Tenon's capsule to simple advancement of the tendon, because the operation is simple and attended with less risk. His experience with limited advancement of Tenon's capsule has been quite encouraging.

Dr. J. S. Prout, of Brooklyn, read a paper on

NEW-FORMATION IN THE VITREOUS OF BOTH EYES.

In the right eye there is a body arching forward. There is no evidence of any relation to the papilla. The speaker thought that it was in all probability a remnant of the fœtal circulation of the vitreous. In the left eye there was a similar body. Drawings showing the appearance presented were exhibited.

Dr. Emil Gruening, of New York, reported

A CASE OF TUMOR OF THE LEFT OCCIPITAL LOBE.

Dr. Edward Jackson, of Philadelphia, presented a lens series for the refraction ophthalmoscope.

Dr. John Green, of St. Louis, exhibited and described a new series of test-letters.

Dr. Charles A. Oliver, of Philadelphia, presented a set of metric test-letters and words for determining the amount and range of accommodation.

Dr. S. D. Risley, of Philadelphia, described

A CASE OF RETINITIS ALBUMINURICA—INDUCED PREMATURE LABOR.

The patient, the wife of a physician, was seen when she was between the fourth and fifth months of pregnancy. She had suffered with headache and giddiness. The urine had been examined a week previously and no albumen found. At this time there was marked disturbance of vision. In a previous pregnancy she had had albuminuria, but no trouble with sight. In a second pregnancy there had been no trouble. The ophthalmoscope showed albuminuric retinitis of both eyes. The urine contained a large quantity of albumen. After consultation, the induction of abortion was advised.

Labor was induced, and she was delivered of a fœtus at five months. She then passed into an unconscious condition, in which she remained four days. There were no convulsions. As consciousness gradually returned, evidences of right-sided hemiplegia with aphasia were noted. The quantity of albumen gradually diminished, and six months later the lady was able to return to her ordinary duties. There were still some traces of aphasia, but vision was greatly improved.

Dr. B. Alexander Randall exhibited a modification of the Loring ophthalmoscope, which consisted in adding a series of cylinders.

Dr. J. A. Andrews, of New York, read a paper on

THE FREQUENT INSTILLATION OF A TWO-PER-CENT. SOLUTION OF NITRATE OF SILVER IN PURULENT OPHTHALMIA.

He had employed this method in twenty-five cases of gonorrhœal ophthalmia, and the eyes were seriously damaged in none of them. The cases were all severe, with much discharge, chemosis, and swelling of the lids. The applications were repeated usually three times a day; sometimes as often as five times per day. The use of the nitrate of silver is graduated to the amount of hyperæmia, and especially to the amount of swelling of the lids. If this be marked, instillations may be repeated frequently.

Dr. Russell Murdoch, of Baltimore, exhibited an impervious covering for the sponge in the administration of ether.

Dr. H. D. Noyes, of New York, read a paper on

MEASUREMENT OF ASTIGMATISM BY THE OPHTHALMOMETER OF JAVAL AND SCHIOTZ.

The following papers were read by title: "Burns o the Eye by Fulminate of Silver and Fulminate of Mercury," "Cases of Foreign Bodies in the Globe, including Two Cases of Spontaneous Extrusion."

OFFICERS ELECTED.

President—Dr. William F. Norris, of Philadelphia.

Vice-President—Dr. Haskel Derby, of Boston.

Secretary and Treasurer—Dr. O. F. Wadsworth, of Boston.

Corresponding Secretary—Dr. J. S. Prout, of Brooklyn.

The next meeting will be held at the Pequot House, New London, Conn., on the third Wednesday of July, 1887.

Adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 23, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY presented, in behalf of a candidate, specimens illustrating certain lesions of *club-foot.*

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. G. C. FREEBORN, from the *Committee on Microscopy*, reported that the *enlarged bronchial glands* presented by Dr. J. Lewis Smith contained tubercle bacilli well marked.

The brain specimen presented by Dr. Putnam-Jacobi at the last stated meeting revealed no evidence of carcinomatous growth.

The tumor presented by Dr. Wylie at the last stated meeting was a *calcified dermoid cyst.*

DR. H. MARION SIMS presented a rather rare specimen of

DOUBLE FIBROID OF THE OVARY,

which, when removed, weighed between five and six pounds. The patient was sixty-three years of age, was operated upon three weeks previously, and made a good recovery without any unfavorable symptoms. Change of life occurred eighteen years ago. She was the mother of one child, twenty-six years of age. In March last she first noticed a swelling in her abdomen, but supposed that it was due to wind in the bowels. It did not yield, however, to such domestic remedies as were used, and she consulted a physician in Summerville, N. J., who recognized a tumor, and referred her to Dr. Sims, who diagnosticated probable fibroid of the ovary, with ascites, and removed it by operation as already stated. The abdominal incision was about seven inches in length. The tumor was firmly adherent posteriorly in the cul-de-sac, and an unusual amount of force was required to break up the adhesions. The pedicle was long and rather broad; it was ligated with silk and dropped. A drainage-tube was introduced, which was removed on the second day, and from that the patient went on to recovery rapidly.

DR. RICHARD T. BANG presented a specimen of

SPINDLE-CELLED SARCOMA OF THE BREAST.

Mrs. T——, thirty years of age, and a native of the United States; has been married nearly five years, but has had neither children nor miscarriage. Family history perfectly good. The patient has always enjoyed excellent health, which has been but slightly impaired by the occurrence of this growth. About four years ago, without any known cause existing therefor, she noticed a small lump about the size of a hazel-nut in the upper and outer portion of the left mamma. This lump gave her absolutely no inconvenience, and it increased in size so slowly that at the end of three and a half years it was but slightly larger than an English walnut. At this time (in December, 1885) she received a severe blow on the breast by accidentally falling over a chair, and from this moment on, the tumor grew most rapidly, so that when I saw the patient for the first time, on May 6th last, I found fully two-thirds of the mammary gland involved by the growth. There was no retraction of the nipple, and only occasional slight pain was complained of. A solitary, very moderately enlarged gland (about the size of a cherry-pit), was found in the left axilla, and no cachexia or depreciation of the general health existed. The skin over the tumor was unbroken, and not implicated by the growth, and the tumor itself was freely movable and unattached to the pectoral muscles. The mass involved the upper and outer two-thirds of the breast, and was stony hard, solid, and heavy to the feel. Just above the nipple pretty deep-seated fluctuation was discovered, and a probable diagnosis of either cystic sarcoma or fibroma having been made, the patient was advised to have the entire gland extirpated. Dr. McBurney, who saw the case in consultation, concurred both in the diagnosis and in the advice given. On June 2d he accordingly, with the assistance of Dr. A. Blauvelt, performed the operation in the usual manner. Corrosive sublimate solution, 1 to 1,000, bone drainage-tubes, and catgut ligatures and sutures were employed, and the wound was dressed with iodoform, iodoform gauze, bichloride gauze, wood-wool, etc. This first dressing was allowed to remain on for ten days, and when it was removed the wound was found to be perfectly healed, excepting a small sinus at either end. Two more dressings have been applied, and this morning both sinuses were found perfectly and firmly healed, and the patient was discharged cured.

The temperature remained normal throughout the treatment.

On section the tumor was found to be made up of a dense, white, lobulated structure, in which was found a cyst which contained about three tablespoonfuls of a sanguineous fluid. The tumor had been examined by Dr. Frank Ferguson, who reported it to be a typical spindle-celled sarcoma.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE TEMPERANCE CONGRESS—DR. RICHARDSON IN A NEW RÔLE—DR. NORMAN KERR ON LEGISLATION FOR HABITUAL DRUNKARDS—MR. KNAGGS ON TRINIDAD—THE LONDON TEMPERANCE HOSPITAL—SMALL POX AND THE ARRANGEMENTS FOR ISOLATION—A CONVALESCENT HOSPITAL FOR LONDON—SOCIETY OF MEDICAL MEN QUALIFIED IN SANITARY SCIENCE—THE SOCIETY OF APOTHECARIES—THE EXODUS FROM LONDON.

LONDON, July 31, 1886.

THE event of the past week has been the British and Colonial Temperance Congress. The profession has not been unrepresented. Dr. Richardson turned up as usual, and on this occasion appeared in a new character, viz., that of an anti-tobacconist. It is to be hoped he will not stump the country on a crusade against nicotine—not but what plenty may be said against it—but the learned doctor is so enthusiastic when he does take up any cause that there is no knowing what he may do. Should he take up the subject, I trust he will not fail to denounce the increasing custom of smoking among mere boys. The number of youthful smokers to be seen in the streets of London is something appalling.

To return to the Congress. Dr. Norman Kerr, who seems to have an insatiable appetite for statistics and tables, read a paper on "Colonial Legislation for the Habitual Drunkard." He referred first to the laws on the subject in force in the United States, and said that the generous and thoughtful provision there made for the victims of the mightiest tyrant on earth put to shame our own disgraceful neglect of an urgent duty. Referring then to our own colonies, he said that they, too, put us to the blush. He then gave a brief *résumé* of the legislative enactments in force in Ontario, Quebec, Nova Scotia, New Brunswick, Manitoba, South Australia, and New Zealand, and pointed out that in these colonies compulsory and permanent laws were in force, whereas our own Habitual Drunkards Act was but permissive and only a temporary measure, its operation being limited to ten years.

Mr. Robert Knaggs (Port of Spain) read a paper on Trinidad, and referred to the number of lives which had been sacrificed there under the notion that alcohol was a necessary stimulant in a depressing tropical climate. In the last twenty-five years twenty-seven members of the medical board had died, and twelve of these owed their premature disease to free living in the matter of

alcoholic drink. Temperance had made some recent progress in the island, and Mr. Knaggs said he believed the drinking customs were being slowly undermined. The doctors were now far more cautious in giving alcohol to their patients, and particularly so in regard to taking it themselves.

After the Congress, the delegates present were invited to visit the London Temperance Hospital. First opened in 1873, it has been successively enlarged until at present one hundred and twenty patients can (as soon as funds permit) be accommodated in the new building in the Hampstead Road. Since the foundation of the hospital, 3,486 in-patients have been admitted, of whom only 183 have died. No alcohol is given unless specially prescribed, and it has been ordered in only a very few cases. In fifty-three cases of typhoid fever it was not given once. Out of the 53 typhoid cases in the ten years ending April 30, 1884, only 5 died, and but one of these was an abstainer. The medical staff are now preparing for publication a series of special tables, showing the results of the treatment of a number of acute diseases without alcohol.

The small-pox epidemic in London has virtually disappeared. One of the elements contributing to this desirable result has doubtless been the admirable arrangements for isolation made by the Metropolitan Asylums Board. Five land hospitals and one floating hospital are under the control of the board for the reception of small-pox cases. In connection with these are three ambulance stations, three steamers for conveying patients to the floating hospital at Purfleet, and two wharves from which they can be consigned from the ambulances to the steamers—a third wharf being now in course of construction. Where possible, patients are taken by steamer down to the floating hospital at Purfleet. During the severe epidemic of last year the river steamers carried 10,971 patients between London and Purfleet, about half of this number being convalescents returning from the floating hospital and convalescent camp. These, of course, are isolated from the patients. During the last epidemic the floating hospital (which consists of two ships for patients, and a third to accommodate the hospital staff) had at times as many as four hundred patients on board, more than a hundred sometimes going down the river in steamers in the course of the day. At present only ten patients are at Purfleet.

An executive committee, of which Sir J. Risdon Bennett, M.D., is chairman, has been formed to carry out a scheme for founding a convalescent hospital for London. This scheme was set on foot last year, and is now in a fair way of being realized. A special feature of the new institution is that medical and surgical treatment is to be provided for its inmates, and it will therefore differ very largely from the numerous convalescent homes, excellent institutions as many of the latter are in their way.

A society of medical men qualified in sanitary science has been formed, with Sir Joseph Fayrer as its president. The first annual meeting has just been held.

The Society of Apothecaries, which was shut out by the two colleges when they combined together for examination purposes, has now applied to join the combination, and the authorities at Blackfriars have pointed out that if not allowed to do so, they will be able, under the new medical act, to appoint assistant examiners and confer a statutory diploma. This would expose the two royal colleges to a very serious competition.

I must now pause and allow your Brighton representative to take up the tale; he will, no doubt, send you an account, not only of the Brighton meeting, but of Brighton itself, from a medical point of view. Everyone who can is now leaving town, and as next week the centre of medical life will be shifted to Brighton, I propose to resume the correspondence from London after the great gathering at Brighton has dispersed and my Brighton colleague bids me resume my pen again.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 1 to August 7, 1886.

MURRAY, ROBERT, Brigadier-General and Surgeon-General, U. S. A., retired, August 6, 1886.

BENTLEY, EDWIN, Major and Surgeon. Ordered from Department of Texas to Department of the East. S. O. 179, A. G. O., August 4, 1886.

APPEL, D. M., Captain and Assistant Surgeon. Ordered from Department of the East to Department of Texas. S. O. 179, A. G. O., August 4, 1886.

MIDDLETON, PASSMORE, Major and Surgeon. Granted leave of absence until September 10, 1886. S. O. 100, Division of the Atlantic, August 3, 1886.

WHITE, R. H., Captain and Assistant Surgeon. Ordered from Angel Island, Cal., to San Diego Barracks, Cal., relieving Captain Leonard Y. Lorings, Assistant Surgeon. S. O. 64, Department of California, July 28, 1886.

APPOINTMENTS.

To be Assistant Surgeons with the rank of First Lieutenant, A. G. O., August 2, 1886:

HARRIS, HENRY S. T., January 5, 1886.
WOOD, LEONARD, January 5, 1886.
BANISTER, WILLIAM B., January 26, 1886.
MASON, CHARLES F., May 5, 1886.

PROMOTIONS.

To be Surgeons with the rank of Major, A. G. O., August 2, 1886:

BARTHOLF, JOHN H., Captain and Assistant Surgeon, January 4, 1886.
KIMBALL, JAMES P., Captain and Assistant Surgeon, January 24, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended August 7, 1886.

RUSH, CHARLES D., Passed Assistant Surgeon. Detached from the Receiving Ship Franklin and ordered to the U. S. S. Pinta.

WILLSON, W. G. G., Passed Assistant Surgeon. Detached from the U. S. S. Pinta, ordered home and await orders.

THERAPEUTIC NIHILISM AT VIENNA.—In 1877, during my trip from Paris here, I made the acquaintance of a very intelligent English attorney. He said, "You are going to Vienna to study?" I answered in the affirmative. "Well," he said, "I want your card, for I am going next year to America, and may need a physician, and I want a man who has studied at Vienna." I asked why. He replied, "This is the reason. The old school give large doses of medicine, homœopathists give small doses, but the Vienna school give none, and that is what suits me." He was not far from the truth. All the remedies that Professor Bamberger has prescribed this term could be counted on the fingers of both hands. No aconite; in fact, no arterial sedative; digitalis as a heart-tonic and diuretic; quinine only occasionally, where a very high temperature exists that does not yield at once to cold baths or sponging. His frequent use of calomel reminds one of his father's practice forty years ago. Cold baths are less frequently and persistently used than ten years ago. One hour and a half Bamberger often gives to the delineation of a single case, but of this time five minutes suffices for all he has to say as to its therapeutical management.—Vienna Cor. *Weekly Medical Review.*

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 7, 1886:

	Cases.	Deaths.
Typhus fever	2	1
Typhoid fever	25	6
Scarlet fever	19	3
Cerebro-spinal meningitis	5	5
Measles	44	7
Diphtheria	55	27
Small-pox	0	0

WHY SOME YOUNG DOCTORS GO TO EUROPE.—I asked a new graduate of one of our Western schools, where I know clinical advantages are at a minimum, to go with me to hear Bamberger. His first question to me was, "Doctor, what is your specialty?" My reply was internal medicine in its broadest sense, with all the gynecology I can find to mix in. His reply was, "Doctor, you make a great mistake; take some specialty, that is all the rage in America! I am after the throat, and when I get back to Indiana I shall expect to do a big business." What absurdity, when we consider the vast and intimate relation of the diseases of the throat and nose to other organs of the body, for a young man to take up such a specialty before he is a thorough physician in the widest acceptation of that term. He further told me he did not understand German, and had no idea of attempting to learn it; that he had spent some time in New York in a throat clinic, and he believed that the advantages there were far superior to what could be gotten in Vienna, but that a man must have the reputation of having studied in Vienna, or it was no go in a large town in America.—Vienna Cor. *Weekly Medical Review.*

THE ASSOCIATION OF AMERICAN PHYSICIANS.—A Washington correspondent of the *Journal of the American Medical Association* charges that this new organization has been established in opposition to the American Medical Association, and with the design of absorbing or destroying it. He seems to be a little worried over the contrast which he says will be attempted to be made between the Association of American Physicians and the American Medical Association in the eyes of the medical world, and inquires, somewhat irrelevantly, whether the American Medical Association is "to be degraded by a set of men in its own ranks, in a profession which teaches and has always taught [and practised?] fraternity of feeling and good-will toward its fellows." A terrible prophecy is the peroration: "The day will come when such as seek to destroy the great temple of medicine in such ways—by caprice and whims and spitefulness—will wofully repent it, will abhor themselves sooner or later, and be ashamed of their associates who, with themselves, lifted a hand or voice to aid in such nefarious work."

ACCURACY IN COMPOUNDING PRESCRIPTIONS.—The result of a curious but very important test as to the accuracy with which chemists, druggists, and others make up prescriptions committed to their care has recently been presented to one of the London vestries. Fifty prescriptions were sent out to ordinary druggists, to co-operative stores, to "doctors' shops," and to certain traders styling themselves drug companies. The mixtures made were afterward analyzed to find out how nearly they agreed with the prescriptions they represented; but in order to give a liberal margin for error, it was resolved not to put a black mark against anyone if the chief constituents were within ten per cent. of the amount ordered; in one instance it was fifty-seven per cent. in excess. The chemists and druggists came out best in this strange competition, as only six per cent. of their prescriptions had to be called in question. Next came the co-operative stores, with twenty per cent. of error; then the "doctors' shops," with fifty per cent.; and lastly the drug companies, who are credited, or rather discredited, with seventy per cent. of errors.—*Provincial Medical Journal.*

EFFECT OF MENTAL OVERWORK UPON THE TEETH.—Among the hard-worked pupils of the Paris public schools the teeth become deteriorated in a few weeks after entry. The second dentition is often premature. These observations confirm the statements of Dr. J. L. Williams, who has given great attention to this subject. He has shown that any mental strain shows itself upon the teeth in a short time, both in increased decay as well as in increased sensibility of the dentine. Dr. D. M. Parker has reported that these same changes are always apparent in men who are in training for athletic trials.—*Boston Medical and Surgical Journal*, June 3, 1886.

SPONTANEOUS TRANSFORMATION OF MORPHINE INTO APOMORPHINE.—A solution of hydrochlorate of morphine for subcutaneous injection (three per cent.) was ordered for a patient, and its injection was promptly followed by relief of the pain without any gastric symptoms whatever. Eleven months later the patient made use of the same solution; but this time the injections gave rise immediately to violent and uncontrollable vomiting. The solution was given to a well-known analyst at Paris for examination, and he ascertained that apomorphine was present, thus accounting for the sickness. He recommended in consequence that solutions of the salts of morphine should never be kept longer than four weeks, and that freshly prepared solutions should not be mixed with the old.—*British Medical Journal*, June 26, 1886.

BABIES AND PERAMBULATORS.—Several writers in the English medical press have recently called attention to the dangers to which infants are exposed when wheeled about in the ordinary way in their perambulators. It is stated that many diseases of the throat and chest are caused in this way, and the remedy proposed is that the children shall sit or lie facing their nurses. The back of the perambulator will thus protect the child from the wind, and at the same time it will be more directly under the eye of the nurse, whose view will not be obstructed by the wagon-top.

THE USE OF ERGOT for illicit purposes has increased so much in Rome that the prefect has issued a circular to the syndics of the city and province, calling upon them to enforce the regulations as to the sale of the drug. It seems that the same medical prescription is unlawfully used for its purchase over and over again, in spite of a pontifical regulation still in force. Pharmacists and midwives are cautioned that if they violate the regulation they will be denounced to the judiciary authorities for criminal proceedings, and if convicted, the severest penalty will be imposed.—*Medical Press and Circular.*

VACCINATION IN JAPAN.—The Japanese do not appear to have lost any of their faith in the efficacy of vaccination for the small-pox. They have just enacted a very stringent law on the subject, for, besides ordinary vaccination in the first year of infancy, it provides for at least two subsequent revaccinations at intervals of from five to seven years, so that by the time a child has reached its fifteenth year it will have been vaccinated three times. During epidemics of small-pox, local authorities also have power, when they deem it necessary, to order the vaccination of all the inhabitants of their districts, irrespective of the vaccinations required by the law.—*Sanitary Record.*

MEDICAL EDUCATION.—There are in the United States no fewer than 89 regular medical colleges, with about 10,000 medical students; 8 of these medical colleges have each from 300 to 600 students, and 7 of them have from 200 to 300 students.

A NEW METHOD OF TAKING THE TEMPERATURE.—Filatoff recommends that the temperature in children should be taken by previously warming the thermometer and then observing the degree of fall, instead of that of rise, of the mercury. The thermometer may be placed in the axilla, and it is asserted that not more than two minutes are required for obtaining a very accurate record of the temperature.

A NEW BERLIN SOCIETY.—An association has been formed in Berlin, of dentists who have received their scientific education and training in America. It is called the "German Association of Doctors in Dentistry Graduated in America," and has established a *Journal für Zahnheilkunde* which is to be the organ of the Society.

CONFUSION IN THE TREATMENT OF SCARLET FEVER.—Dr. J. M. Sooy, of Philadelphia, writes to show how the therapeutists of the regular and of the homœopathic schools have erred in their modes of administering belladonna in scarlet fever. Belladonna, he says, given in small doses produces dryness, paleness of the skin, and sometimes a bluish color of the mucous membranes. This anæmia is caused by the contraction of the arterioles, the agent being a stimulant to the vaso-motor system; but when belladona is given in larger doses it causes dilatation of the arteries and a fall of blood-pressure. This action is induced by an overstimulation of the vaso-motor nerves, and it is the secondary, and not the primary, action of the drug which gives to the superficial parts an appearance not unlike scarlatina. If now a small dose cause anæmia, it is evident that such a plan of treatment would reduce the inflammatory material. But this is not according to the laws of homœopathy, but of antagonism. If large doses should be given, there would be overstimulation of the vaso-motor system, and a condition not unlike the eruption of scarlatina would result. This would be according to the law of similars, but would not be productive of beneficial results. In regular practice belladonna has been abandoned in the treatment of scarlet fever, and has been proclaimed as worse than useless, because his deficient knowledge of therapeutics has led the physician into homœopathy; whereas the homœopathist still speaks in high terms of the many virtues of the drug, owing to the fact that he has followed ignorantly the law of antagonisms, and not the law of similars, and has, consequently, obtained good results.

A VERY DEMOCRATIC CORRESPONDENT writes us: "I have long been a reader of THE RECORD, and have noticed in its contributions and proceedings of the various societies the language almost invariably used by members of the profession. We were all taught in our younger days that in the United States there was no such a thing as classes among her citizens. Observe the allusions so often quoted: 'The upper, the middle, and lower class of patients.' It sounds too monarchical; the words should have no place in an American journal; but probably its English or imported, you know; or can it be possible the country has a class of Cæsars acting as physicians and surgeons?"

HYDRONAPHTHOL AND BETA-NAPHTHOL.—Beta-naphthol was introduced by Kaposi in 1881 as a parasiticide in diseases of the skin, but was soon found to be a dangerous poison, even when applied externally, and its field of usefulness was consequently much restricted. Recently a new antiseptic agent, called hydronaphthol, has been brought to the notice of the profession by a firm in this city. It seems to be nearly related to beta-naphthol, although it differs from it by its melting-point, shape of crystallization, and reactions. It has been stated by Professor Jacobsen, of Berlin, that the two were identical, but Dr. Justus Wolff sends us a communication asserting that this is by no means the case. Samples of beta-naphthol, declared by Professor Jacobsen to be chemically pure, and of hydronaphthol, were obtained, and equal parts of each were given to two rabbits. The rabbit which had received the beta-naphthol died in a short time, but the one to which an equal quantity of hydronaphthol had been given did not seem to feel any effects at all and remained healthy and vigorous. Dr. G. R. Fowler reported in the *New York Medical Journal* a number of successful operations in which hydronaphthol had been employed as the only antiseptic, and in which no untoward effects had been observed, and none at all resembling those reported by others as resulting from the action of beta-naphthol. Dr. Wolff concludes therefore that two chemical compounds, of which one is a deadly poison and the other not poisonous at all, are not identical in their composition or chemical constitution, and must be two distinct substances.

A WISE PRECAUTION.—Before undertaking an autopsy, Dr. Crevenger recommends holding the hands over strong liquid ammonia, when the smarting which ensues will reveal all sensitive or abraded places that need a touch of caustic before beginning the examination.—*Weekly Medical Review.*

NEW METHOD OF PREPARING FEHLING'S SOLUTION.—Schmiedeberg uses mannite in place of Rochelle salt in making Fehling's solution. He claims that the addition of mannite insures stability to the solution. His formula is as follows: Dissolve 34.632 gm. of crystallized copper sulphate in 200 c.c. of water; to this solution is added a solution of 15 gm. of very pure mannite in 100 c.c. of water and 480 c.c. of solution of caustic soda (1.145), and, lastly, sufficient water to make 1 litre.—*American Journal of Pharmacy.*

THE DOG IN THE MANGER.—We do not think it right that a Chicago medical college should procure its anatomical material from the St. Louis "Potter's field."—*St. Louis Weekly Medical Review.*

THE WATERMELON CURE.—Professor Manassein recommends the watermelon as a cheap but effective substitute for grapes in the treatment of chronic congestion of the liver, chronic intestinal catarrh, and similar affections.

NEW METRIC ABBREVIATIONS.—The International Committee of Metric Weights and Measures has adopted the following system of abbreviations. Italics are employed, with the exponents 2 and 3 to denote square and cubic measure: Metre=*m*, decimetre=*dm*, centimetre=*cm*, millimetre=*mm*, kilometre=*km*. Metre square=m^2, metre cube=m^3, and so for the rest. Litre=*l*, decilitre=*dl*, etc. Kilogram=*kg*, dekagram=*dkg*, gram=*g*, decigram=*dg*, centigram=*cg*, and milligram=*mg*.

THE MANUFACTURE OF SKELETONS.—A correspondent of the *Medical Press and Circular* describes what he saw in an establishment for the preparation of skeletons in Paris. He made the acquaintance of a female "bone-peeler" at one of the hospitals, and was conducted by her to the factory, situated in the outskirts of Paris. The building to which he was conducted was an immense wooden construction subdivided into a main *atelier* and out-houses. The larger room was occupied by a series of large cauldrons, the emanations from which were, even to one accustomed to the suave odor of the dissecting-room, nauseating in the extreme, and the blend formed with that of various crude antiseptics was more peculiar than fascinating. On stirring up the *soupe* contained in the cauldrons with a broomstick, a heterogeneous collection of limbs was seen, many of them having evidently been amputated. A grinning head, with glaucomatous eyes and fleshless lips, came to the surface now and again with a ghastly leer, which was at once lost in the froth which covered the seething liquid. The disarticulation of skulls is carried on separately, as it is a branch requiring greater skill and nicety in its manipulation. It is effected on the skulls of young adults or children by filling the emptied cranial cavity with dried peas, which are

then steeped in water, and in swelling compel the disjunction more delicately than could be done in any other way. After prolonged boiling the limbs are placed on a table and the adhering tissues carefully removed, each workman or workwoman having his or her own specialty. The bones are then bleached, the cheaper varieties simply by means of chloride of lime, the better ones in the sun, and they ultimately pass into the finishing-room, where they are assorted, and converted, as far as may be, into "articulated skeletons." It requires no small amount of ingenuity and knowledge of this particular department to be able to choose out of the miscellaneous collection of bones wherewithal to construct a skeleton which shall pass muster for that of a single individual, and only the best bones are so adapted, the remainder going to make up the disarticulated and half-skeletons which have to answer the purposes of study for the more economically disposed students. In another tank, awaiting treatment, were a number of infant bodies, varying from minus four months to plus several days. In the show-rooms they were arranged in a graduated scale (*échelle mortante*), from the diminutive little ex-mortal, whose height did not exceed four inches, to the adult baby measuring from eighteen to twenty, all being in the attitude known in the military world as that of "attention." These have a special value of their own, far greater in proportion to their size than that of their bigger brethren. The supply was obtained from the hospitals and dissecting-rooms and in part also from the various convict establishments.

A Novel Obstetrical Expedient.—Dr. Shustoff writes in *Russkaya Meditsina*, of April, 1886, that he was called to see a woman who had been in labor five days. The pains had begun well but had since ceased. Upon examination he saw something black protruding from the anus, and a little pulling brought to light a sausage over seventeen inches long and fourteen inches in circumference. The pains now began again, and the woman was soon delivered of a dead child. Dr. Shustoff found on inquiry that the sausage had been introduced on the recommendation of an old woman of the neighborhood, in order to insure the birth of the child by the normal passage. This was probably the old wife's best attempt at supporting the perineum.

Painless Cautery.—It is said that a saturated solution of nitric acid and muriate of cocaine makes a painless cautery. In our hands the solution causes some pain, but little. It is strange to contrast the effect of the cocaine applied previous to the application of the acids and when it is used combined with the acids. In the first case it will require four or five minutes to get its physiological effect, and in the last we have the instant effect of the cocaine.—*Alabama Medical and Surgical Journal.*

A Peculiar Form of Dropsy.—Dr. M. Pargamin writes, in the *Russkaya Meditsina* of April 27, 1886, that he was called to see a young woman who was said to have dropsy, which the brother thought she had caught from one of his fellow-workmen who was suffering from a similar affection. On examination, it was found that the woman was in labor, the child presenting by the arm. Dr. Pargamin turned and delivered, but the abdomen was still much distended, and it was not until two more infants appeared that the dropsy was definitely cured.

Righteous Indignation.—A writer in an exchange thus introduces some eloquent and forcible remarks on a case of abortion which had come to his knowledge: "The low muttering thunders of destruction and roaming blizzard of the birth-strangled babe have just swept over our sister city, Atlanta, and now begin to disturb the gentle zephyrs of the Magic City."

A Memorial Hospital in Albany.—Mrs. Leland Sanford has purchased a piece of land on Washington Avenue, Albany, adjoining the site of the old Lathrop mansion, and, it is stated, will erect on it a handsome and well-appointed hospital for old men and women, as a memorial of her parents.

Scarpalogy.—This is the latest science which has come to rival palmistry, and is the art of reading a man's character by the shoes he wears, or, rather, by the way in which he wears them. One of its exponents recounts, in a French journal, *La Graphologie*, some of the axioms of the art. If the heel and sole of the shoe are worn down evenly, the owner is a good business man, energetic and quick to decide. If the outer side is most worn, the wearer is fond of adventures; while, if the inner side is most used, he is of an irresolute and rather weak character. Other traits of character, both good and bad, are equally clearly and infallibly expressed by the under side of the shoes, and the writer claims that he can read a man's disposition better in this way than by his handwriting. His soul is, as it were, pictured by his sole.

Carbolic Acid in Whooping-cough.—Dr. W. T. Cory has recently recommended again carbolic acid in whooping-cough. Dr. C. W. Suckling (*British Medical Journal*) believes, from his experience with it in twenty-three cases, that it is almost a specific. He gives the glycerine of carbolic acid in mint-water.

Dr. George W. Dewey of Moberly District, Mo., thus forcibly descants on some of the delusions of the day: On Gynecological delusions, the first gynecologists we read of lived in Judæa early in the Christian era. They got stuck on a Uterine Polypus of twelve years' standing. They took all the money a poor woman had, but failed utterly to cure her.

> As yet the doctors had not come
> To use the duck-bill speculum,
> Nor douches up vaginas sent,
> Nor introduced sea-tangle tent.

. . . Every woman who enters the office of the gynecologist is informed she has a retroversion or an anteversion, or a prolapsion, or cervicitis, or a cellulitis, or laceration, or some other uterine malady, and that to make a correct diagnosis, and to apply treatment, she must at once assume the classic genupectoral or Sims position. No sooner done than she is defloured by a Sims duck-bill. Not only married women but young virgins must submit to this deflourment. Not long since I was called to see a beautiful girl of sixteen summers, in whose countenance one could behold the *ne plus ultra* of virgin health, who informed me that for a slight pain in her back she had the day before called in a young gynecologist, who very gravely informed her she had "womb disease," and that it would be necessary for him to examine her with a speculum. She called on me to know if such damnable procedure was necessary. I told her I would as soon think of raping her. I advised her to keep her maidenhead, that it was a priceless jewel, and that such an examination was wholly unnecessary, and was proposed solely to gratify the idle or lecherous curiosity of a fool. . . . But once in a practice of forty years have I deemed it necessary to make a vaginal examination of a maid, and then it was in consultation with my friend Dr. Martin. The patient was a blushing maid of sixteen summers—a blackberry blonde. Her ancestors came originally from Zanzibar. She had a vaginal discharge, and as there was some doubt about its nature and cause, we very hesitatingly proposed a vaginal examination, to which she with much reluctance finally consented. Our diagnosis was gonorrhœa! . . . Our daily papers are filled with cuts and advertisements gynecological. Every reading lady of fifteen is posted on flexures, prolapsions, and "female weakness." A bitter wail comes up from New England that the native population are becoming extinct. Syringes, sponges, and womb-veils will exterminate the descendants of the Mayflower. The quidnunctious Yankee woman is posted in gynecology. She never breeds. The next decade of aggressive gynecologists will demand a gynecological chair in our female colleges, the business of which will be to teach young ladies how to avoid conception.

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Original Articles.

SUPRA-PUBIC CYSTOTOMY; EXTRACTION OF LARGE CALCULI; CORROSIVE SUBLIMATE POISONING.

BY WILLIAM T. BELFIELD, M.D.,

GENITO-URINARY SURGEON TO THE COOK COUNTY HOSPITAL, CHICAGO.

MAY 29, 1886, I saw, in consultation, M. B——, seventy years of age, who for nine years had suffered from a cystitis of steadily increasing severity. Eight physicians in various parts of the country, who had successively treated him, had agreed that the cause of the cystitis was prostatic enlargement; several surgeons had sounded him for stone with negative result, the last examination having been made under chloroform last year.

The patient was found emaciated, feeble, practically bed-ridden; urinating by catheter every half-hour or oftener, day and night; complaining of constant pain, aggravated by bodily movement, above the symphysis, in the rectum, and especially around the navel. He had been long in the habit of using morphine; for over two years had been unable to empty the bladder, except by catheter. The prostate was much enlarged laterally as well as vertically, but was smooth and symmetrical; the urine contained much pus and some blood. These symptoms indicated a vesical calculus as well as prostatic enlargement; though I supposed, from the negative results of exploration by his former medical attendants, that the stone was probably small, and either encysted or ensconced below the projecting prostate. (In three cases I have, upon digital exploration of the bladder, found thus concealed small calculi, which the sound in my own and other hands had failed to detect.) The patient was so convinced, by previous examinations, of the absence of calculi that he refused permission to use the sound; but he was anxious to have an attempt made, at any risk, to relieve the prostatic obstruction, which he had been taught to regard as the cause of his agony.

June 7th, with the assistance of Drs. Miller, Schaefer, and Randell, I undertook supra-pubic cystotomy for the purpose of removing, by galvano-cautery, that portion of the prostate which I assumed projected into the bladder. As soon as the patient was etherized I, for the first time, introduced a sound; it immediately became apparent that the bladder contained a large calculus. Having injected into the bladder seven ounces (all it would hold) of boracic acid solution, I made the usual incision down to the bladder and upon the point of a sound which then emerged through the vesical wall. At this stage much difficulty was experienced and time expended in the effort to enlarge the incision, the greatly hypertrophied bladder clasping the sound most rigidly; finally the wound was enlarged by the finger-nail.

The finger in the bladder found a median prostatic tumor about one inch in breadth, and projecting nearly an inch into the vesical cavity; behind and below this lay a calculus of about the size and shape of a walnut; adherent to the fundus was a second stone, a triangular prism in shape, 1½ inch long and 1¼ inch broad. Several attempts to extract the first stone failed on account of its size; it was therefore crushed and the fragments removed. The second stone, after resisting efforts at crushing, was with much difficulty extracted entire. The patient was by this time so collapsed—having been under ether more than an hour—that I deemed it unwise to prolong the operation, and abandoned the removal of the prostatic projection, which could have been accomplished without great difficulty. A drainage-tube was inserted in the lower angle of the wound and a soft catheter in the urethra; as the edges of the wound had been much bruised by the extraction of the intact calculus, no sutures were inserted.

Next day the temperature was 100.5° (the highest observed) and pulse 108; on the third day the temperature was normal and so remained, with slight variations. The wound was irrigated once daily with a bichloride of mercury solution, one to one thousand, and the bladder washed with a boracic acid solution.

Progress was favorable until the eleventh day, when there began a severe diarrhœa with rectal pain and tenesmus. Under camphor and opium slight improvement was noted. Two days later patient complained of a strong metallic taste, and the stools were slightly tinged with blood. It was not until then that the probable significance of the symptoms—sublimate poisoning—occurred to me, and that the use of the solution was discontinued.

Diarrhœa persisted, and was now accompanied with severe pains in the rectum and abdomen; the pulse became more rapid and feeble, and the patient was evidently failing. A week later (about the twentieth day after operation) a decided improvement in both local and general symptoms began, and became so decided that strong hopes of ultimate recovery were again entertained. At the beginning of the fifth week, however, diarrhœa and abdominal pains again became severe; the patient, though never vomiting, resolutely refused food because of the nauseating metallic taste; he rapidly sank, and died July 13th, the thirty-sixth day after operation.

As no autopsy was permitted, I was enabled to make only a hasty examination of the abdominal contents and to secure the bladder and kidneys. The peritoneum was normal, free from all traces of inflammation recent or old; there was no suppuration in nor around the bladder. The vesical wall was about five-eighths of an inch thick; the mucous membrane healthy except for a few small ecchymoses; the kidneys and their pelves were normal; under the circumstances the intestinal canal could not be examined.

Although no other case of sublimate intoxication through irrigation of wounds has come under my observation, yet a perusal of reports in current literature leaves little room for doubt that such intoxication existed in the present case; in how far it contributed to the fatal result, and to what degree this termination was due to senile exhaustion, may be debatable questions. The factor which so often causes death after (perineal) operations on the hypertrophied bladder—cysto-pyelitis—was certainly absent.

The calculi weighed two ounces and six drachms.

618 OPERA HOUSE BLOCK.

DR. WHITESIDE HIME, who lately delivered an address on "Pasteur and Protective Inoculations against Zymotic Disease," at the Royal Institution, is reported to be suffering from a wound inflicted in performing a post-mortem examination upon a dog which had died from rabies. He has gone to Paris to place himself under the treatment of M. Pasteur.

TWENTY-ONE CASES OF "TOY-PISTOL" WOUNDS, WITH A NEW METHOD OF TREATMENT.

By CHARLES A. POWERS, M.D.,

SURGEON TO OUT-PATIENTS, CHAMBERS STREET HOSPITAL, NEW YORK.

DURING the month of July of every year the daily press chronicles the death of a varying number of children from wounds produced by the "toy-pistol;" two such deaths have come to my knowledge, the present year, from professional sources, and I have read of many more in the daily papers; and while the mortality doubtless forms but a small percentage of the entire number of cases, it is yet sufficiently great to attest the danger which attends this class of injuries, and to demonstrate the importance of special care in their treatment.

These wounds are inflicted at very short range, and may be produced by an ordinary pistol from which is fired a blank cartridge, usually of .22 calibre, or by a smaller weapon upon which a cap is exploded. In the former the wound is made by the wadding of the cartridge, in the latter a piece of the cap is blown into the tissues.

In the cases presented herewith no distinction is made regarding the weapon used, though in the majority of the cases the injury was due to a wad from a blank cartridge; in no case was a bullet the source of trouble.

In by far the greater number of cases the palm of the hand is the seat of injury, and this rationally accounts for the attendant mortality: a foreign body is lodged beneath the palmar fascia, and, as a septic focus, may rapidly occasion cellulitis, and, possibly, septicæmia or pyæmia. In the newspaper reports above mentioned tetanus was generally given as the cause of death; its danger in palmar wounds is too well recognized to need comment.

During the ten days immediately before and after July 4th of the present year, twenty-one patients sought treatment at the Out-patient Department of the Chambers Street Hospital for wounds produced by the "toy-pistol." One of these, a boy, twelve years of age, had received a wound of the hand between the index and middle fingers six days previously, and had been treated by a physician, though the method of treatment was not ascertained. When first seen the hand was the seat of diffuse cellulitis, greatly swollen, hot, painful, reddened, brawny, and œdematous; the wrist and forearm were commencing to swell, the epitrochlear and axillary lymphatics were enlarged and painful. The discharge from the wound was scanty and ill-conditioned. Constitutional symptoms were limited to anorexia, headache, and general muscular weakness.

He was etherized, the wound enlarged and explored to a depth of one inch and three-quarters, but at that time no foreign body could be found. Free incisions were made on both palmar and dorsal surfaces of the hand, and compresses wet with a two and a half per cent. solution of carbolic acid were applied, and frequently changed.

The original wound was stuffed with the wet gauze, and on the eighth day a large wad was discharged from it. The cellulitis quickly disappeared, the wounds gradually closed, and on the twenty-eighth day he was discharged with a perfect result.

The remaining twenty had been hurt but a short time before they came under observation. They were all males, and the average age was eleven years. In fourteen cases the wound was situated in the palm of the hand or in the cleft between adjacent fingers; in three cases a finger was the seat of injury; and in one each the upper eyelid, the abdominal wall, and the gluteal region. The wounds varied in depth from one quarter of an inch to two inches.

In all of these twenty cases the following plan of treatment was adopted and thoroughly carried out: The parts about the wound were well cleansed with a solution of the bichloride of mercury—one part in one thousand—a free incision made at the site of the wound, as nearly to its bottom as seemed practicable, foreign bodies removed if they could be found, the wound itself thoroughly washed out with the bichloride solution, and loosely packed and dressed with compresses wet in the same.

In most of the cases the sides of the wound were blown full of powder, and for the first few days the discharges were markedly blackened by this.

The dressings were changed daily, and at each time the wound was well syringed out with the sublimate solution, in some instances wads or pieces of cap being washed away. When the discharges assumed a healthy appearance, the wound was dressed with the balsam of Peru.

The wounds healed kindly, and, on an average, were completely closed in sixteen days. In one case—a deep wound between the thumb and index finger—there was moderate reaction in the surrounding tissues the first day; but this went down within twenty-four hours, and it was the only complication of any kind whatever. In no case was there septicæmia, tetanus, or even cellulitis, and in every case the result was in all respects perfect.

This, then, seems to me to be the proper, and, in fact, necessary way of treating these toy-pistol cases: Scrupulously to cleanse the surrounding parts with an antiseptic solution of sufficient strength, make an incision at the site of the wound of such extent and to such depth that the discharges may have free exit, wash the wound out antiseptically, drain it, and let it granulate up from the bottom.

Of course one would avoid the palmar arches, or other important structures. Pain is prevented by the injection of a few minims of a four per cent. solution of cocaine, and a small brush will be found useful in thoroughly cleansing the bottom of the wound.

It was noticeable that in most of the cases of palmar wound the hand was in the position of the *main en griffe* when the patient first presented himself, and it retained that position for one or two days. It must have been due to a reflex paralysis of the interossei muscles, for it was independent of any direct injury to the ulnar nerve.

REMOVAL OF THE UTERINE APPENDAGES.

NINE CONSECUTIVE CASES.

By MARY A. DIXON JONES, M.D.,

GYNECOLOGIST TO WOMAN'S HOSPITAL OF BROOKLYN, N. Y.

CASE I. *Fibromyomata; chronic salpingitis; enlarged and cystic ovaries.*—Y. D——, aged thirty-five; married thirteen years; two children, youngest seven years of age; no miscarriages. Menstruation commenced at the age of thirteen; menorrhagia. When eighteen years of age, menstrual more frequent, lasting longer terms, and accompanied with pain; sometimes only one week in the four was free from the flow. Her general health began to suffer, for which she was given various tonics.

I was called to see the patient March, 1885. She was then very anæmic, weak, and prostrated, and there was mental depression; pulse full, and a temperature varying from 99° to 99½° F. On examination I found two subperitoneal uterine fibroids; uterus measured four inches in width, and its hard, irregular surface left no doubt that there were intramural growths. The cervix was lacerated, perineum ruptured, and the uterus had a tendency to sink down into the lower part of the pelvis, thereby interfering, to some extent, with the functions of the rectum and bladder.

This condition of the uterus, with the accompanying hemorrhages, was no doubt the cause of her suffering and ill-health, and though fibromyomata may be regarded by some as harmless and seldom fatal,[1] yet the complications in this case would certainly lead to some disastrous re-

[1] "Relatively few of them are fatal" (Pepper's System of Medicine, vol. iv.).

sult.[1] Her cachectic appearance and the low grade of constitutional disturbance suggested the possibility of some inflammatory action, or even the possibility of carcinomatous or sarcomatous degeneration.[2]

But whatever were the conditions of the patient, she must be relieved if possible. Her system seemed now on the limits of its capability of endurance, the tumors were evidently increasing in size, and might at any time cause dangerous pressure or fatal hemorrhage. The question was, what was best to be done. Should we commence using ergot, with the vague hope of somehow having good results? Would the sub-serous tumors and the interstitial fibroids be favorably affected thereby? Could we be justified in placing her for months under the influence of ergot, risking the dangers of abscesses and ergotism? Would she live to stand the long and uncertain experiment? And were we not equally uncertain of any good result?[3]

Should we try the various "sorbefacients," iodides, bromides, and chlorides, which are said to have the power of removing these neoplasms?[4] I could not believe this would be of the least efficacy, and their long-continued use would only derange an already enfeebled stomach, and still more impoverish an already impoverished system.

Should we try electrolysis, piercing the tumors with long electrolytic needles? Such a proceeding in this case would be attended with grave and unusual dangers.[5] Should we remove the sub-serous tumors, according to Schroeder's method of partial hysterectomy? The operation is extremely dangerous, and, even if successful, there would still be the interstitial fibroids, which probably were making most of the trouble. Enucleation and traction have had brilliant results in the hands of two of our eminent American gynecologists, yet, with our present advance in surgery and improved methods of operating, hysterectomy seemed less appalling and less hazardous, and would more fully meet all the indications in this case.[6]

There was left for consideration either hysterectomy or removal of the uterine appendages. In the present state of the patient, a necessity for the former operation would be unfortunate, and the uterine appendages were so diseased that *their* removal was a necessity.

I decided to do either hysterectomy or Tait's operation, as would be best for the patient. May 19, 1885, the patient was received into my private hospital, and on May 23d I performed the latter, assisted by Dr. C. C. Lee, Dr. C. N. Jones, Dr. S. King, and Dr. J. C. Minard. The condition of the uterus was well examined, and it was deemed advisable to remove only the appendages. There was considerable difficulty in securing a pedicle. The ovaries were three times their normal size, and projecting from each one was a cyst the size of a hen's egg. It seemed almost a question whether we were operating for cystic ovaries or for a fibroma.

The patient slept well the night after the operation; next day took some nourishment; sixth day ate solid food with relish. Temperature, 98⅘°; pulse, 70. Eighth day, stitches removed; abdominal wound entirely healed. On the twenty-fifth day after the operation she was discharged from the hospital well, and walked four blocks that morning without any discomfort. She has continued to grow strong, and has been in excellent health ever since, has gained in flesh, is active and vigorous, and says she has not been as comfortable or as well since she was a girl. The size of the tumors are gradually diminishing.

Macroscopical examination: The tubes are long and tortuous, the ovaries are enormously enlarged, and on their surface exhibit numerous cicatrices. On section the structure is dense and fibrous, and enclosing numerous cyst cavities.

Microscopical examination:[1] Both ovaries are in a state of chronic ovaritis. All the special ovarian tissue

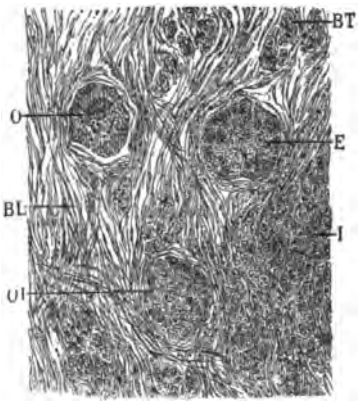

FIG. 1.—Sub-acute Ovaritis. B L, Longitudinal bundles of dense fibrous connective tissue; B T, transverse bundles of such cicatricial tissue; I, groups of inflammatory corpuscles of recent date (acute inflammation); O, ovum, coarsely granular; E, ovum split up into epithelia; O I, ovum split up into epithelia and inflammatory corpuscles. × 500.

is replaced by dense fibrous connective tissue, coarse fibres interlacing. The left ovary in its cortical portion exhibits nests of inflammatory corpuscles, which shows that the morbid process in portions of the ovary is sub-acute. In the cortical substance of the ovary are still left a few small ova, and it is interesting to trace out under the microscope the manner in which the ova are destroyed. We could also see groups of epithelia, when an ovum had been split up into its constitutional elements; still other groups gave a cluster of partly epithelial and partly inflammatory corpuscles, which latter had arisen from the epithelia. Such inflammatory corpuscles mixed with those arising from the connective tissue and the smooth muscle-fibres, showed the formation of cicatricial fibrous connective tissue.

CASE II. *Chronic ovaritis; encysted sarcoma of left ovary; salpingitis.*—Miss L. M——, single; thirty-five years of age. Menstruation commenced at the age of

[1] "Fatal results by no means infrequent" (Meadows, Brit. Gyn. Journal). "Uterine myoma is fatal in a much larger number of instances than is generally supposed (Tait, Brit. Gyn. Journal). "The growing tumors create exhausting hemorrhages, mental depression and anxiety, and disturbance of the functions of nutrition and excretion, which usually drag the patient down to the grave (Thomas, p. 533).

[2] "I have had several instances under observation where the tumor of a simple fibroid rapidly underwent the metamorphosis into sarcoma (Emmet, p. 545). "The weighty authority of Virchow is cast into the scale favoring the possibility of sarcomatous degeneration" (Thomas).

[3] "Much harm has resulted from the injurious use of ergot" (Emmet). Thomas says he has known many fatal cases of sloughing when the rigidly contracted os prevented a resort to surgical procedures. "The moment the treatment ceases the hemorrhages come back as violently as ever" (Lawson Tait).

[4] "It is not possible by therapeutical means to obtain a sensible diminution in the volume of a real fibrous tumor" (Scanzoni). "We have never obtained any sensible results from the internal exhibition of iodine" (Scanzoni). "Medical treatment is worse than useless, it is a mere waste of time; I would say, scarcely honest" (Meadows' Brit. Gyn. Journal). "I very much fear that no remedy exists that will exert any influence on the growth of these tumors, or cause their absorption" (West and Duncan). "We know of no means whereby they can be made to disappear short of a surgical operation" (Hewitt, op. cit., p. 569). "No such effect can be looked for with any confidence" (Thomas). "We are to-day ignorant of any means, other than extirpation, by which a hard fibroid can be removed from the uterine tissue" (Emmet, op. cit., p. 566). "I have never seen a single instance, nor an approach to one" (Tait, May 27, 1885). "The medical treatment of uterine fibroma is a myth" (Lawson Tait).

[5] "I have seen several deaths occur from it in this city" (Emmet). "The profession has not generally consented to the adoption of this measure as safe and efficacious" (Pepper's System of Medicine, p. 270, vol. iv.).

[6] "The results of enucleation (interstitial fibroids) are by no means encouraging. We class the operation among the most hazardous in surgery" (Diseases of Women, West and Duncan). "It really deserves, as far as I am concerned, the appellation of the word butchery" (Lawson Tait, Brit. Gyn. Journal). Emmet says: "In this city alone three deaths have occurred from perforation by the hand of three different operators when dexterity could not be questioned" (Op. cit., p. 607). Dr. More Madden, before the British Gynecological Society, speaks of the "*less heroic measures*, such as enucleation and removal by traction," and says: "I think the operation of enucleation, which is really a very simple operation, and which has been very successful in my practice, is preferable in suitable cases. By this operation I have removed not only large submucous fibro-myomas, but also interstitial, and in some instances partly sub-serous, tumors." One case he reports: "Uterus retroflexed, hollow of the sacrum occupied by a large globular interstitial tumor, as large as a fœtal head at the seventh month." The uterine cavity was laid open and the uncertain instruments were plunged in, pulling forth the tumor. "A large coil of intestines followed," as if to know whether he so unkindly knocked or no. The instruments were in the peritoneal cavity! Not able to see what was the injury, how to repair it, or how to clean the cavity. The patient was in collapse, but fortunately recovered. The second case he reports: "Uterus completely retroverted, a considerable-sized tumor was found bulging into the uterine cavity. The most prominent portion of the tumor was firmly grasped by the vulsellum and forcibly dragged down through the os, and as far as possible into the vagina; and the growth was thus cut away. In this way we had removed more than two-thirds of the growth when the patient became collapsed. On the second night after the operation she again became collapsed, sank and died." As I see it, a carefully and well-arranged hysterectomy is less dangerous, and gives a more intelligent chance of saving life. About the time of my operation, or just before, I had the pleasure of witnessing Dr. C. C. Lee perform hysterectomy, at the New York Woman's Hospital, for an immense cystic fibroid of the uterus. The operation progressed pleasantly, and the patient made an excellent recovery

[1] The microscopical examinations were made in Dr. Heitzman's laboratory, part of them by Dr. Mary D. Jones and part by Dr. C. N. D. Jones.

thirteen; severe pain the first time, and she has never passed a period since without great suffering, the pain always commencing three or four days before the flow. The flow now lasts four or five days, not as long as formerly, nor is the flow as great, but the pain is constant and unremitting, so severe at times she can neither walk nor stand. She also states that her first attack of serious illness was fifteen years ago, when she was taken with a hard aching pain in the left side of the pelvis, which increased gradually year by year, ofttimes preventing her from sleeping, and frequently so sharp and lancinating that she had to scream with the agony. For this suffering she consulted many physicians, and had a great variety of treatment; some prescribed fly-blisters to be repeatedly placed over the lower part of the abdomen, and leeching at intervals; some used pessaries which she said "always made her worse;" for nine months she was treated for "inflammation and misplacement," with no relief; a year she was treated for "ulceration," no better results; for five years she was treated for "uterine congestion." The next physician, after attending her for some time, said he could do nothing more, and relieved by hypodermatic injections of morphia. Her last physician treated her for valvular disease of the heart; said the uterus was misplaced and bound down by adhesions. He also attempted to introduce pessaries, which, as before, "gave great distress."

The patient first called to see me May 5, 1885. I found the uterus acutely anteflexed, not adherent, ovaries small, tender, and exceedingly sensitive. The patient was extremely nervous, hysterical, and her mental condition somewhat disturbed. Many of her friends said "she was not exactly right in her mind." But I considered all these abnormal nerve symptoms due to reflex irritation from the condition of the ovaries, and informed the patient that an operation for their removal might be necessary.

I did not see her again for more than a month, and on examination found the same conditions I had previously diagnosed. The patient informed me that she had made efforts to get into a hospital, but had not succeeded. First applied to the Homœopathic Hospital in New York, was examined by the visiting surgeon, but not admitted. Next applied to a hospital in Brooklyn; after a consultation of the staff, she was informed that she was incurable, and the hospital did not receive incurables." I told her I would admit her in to my private hospital, give her any necessary treatment, and perform for her any operation that might be necessary for her recovery. The next day, June 18th, she entered. I had her immediately put in bed, kept quiet, good nourishment. Massage twice daily, bowels freely open, hot douches daily, and the skin kept active by warm baths and rubbings.

June 25, 1885, I performed laparotomy, assisted by Professor Wylie and Dr. C. N. D. Jones. Dr. S. King gave the ether; the ovaries and tubes from each side were removed. The next day her temperature was 101°, pulse, 98. On the fifth day she asked for beefsteak and toast for breakfast, and on the eighth day the sutures were removed from the abdominal walls, when the wound was found entirely healed, and on August 1st she was discharged from the hospital apparently well.

Macroscopical appearance of specimens: Both tubes are dilated; the left at one portion is dilated into a sac 2 ctm. in diameter, and at the fimbriated extremity the lumen is obliterated by inflammation. Both ovaries are smaller than normal, and contain numerous small cysts.

Microscopical examination: Section from left ovary gave a rather startling appearance; there were numerous comparatively large alveoli, or closed places, filled with a tissue endothelial in nature; the alveoli were surrounded by and closed with coarse fibrous connective tissue, richly supplied with blood-vessels. This connective tissue penetrated the alveoli, remaining fibrous in character, and produced elevations which were surrounded by endothelial tissue. The boundary line between the connective tissue and the endothelium in most places was sharply marked, in other places the two tissues blended without any definite line of demarcation. The endothelial tissue consisted of globular and polyhedral corpuscles, mainly arranged in rows, and freely intermixed with dark brown fat- and pigment-globules. The rows of corpuscles are in many places interrupted by light gaps, probably caused by a liquefaction of these corpuscles. This tumor we would have to term either an endothelioma or an alveolar sarcoma.

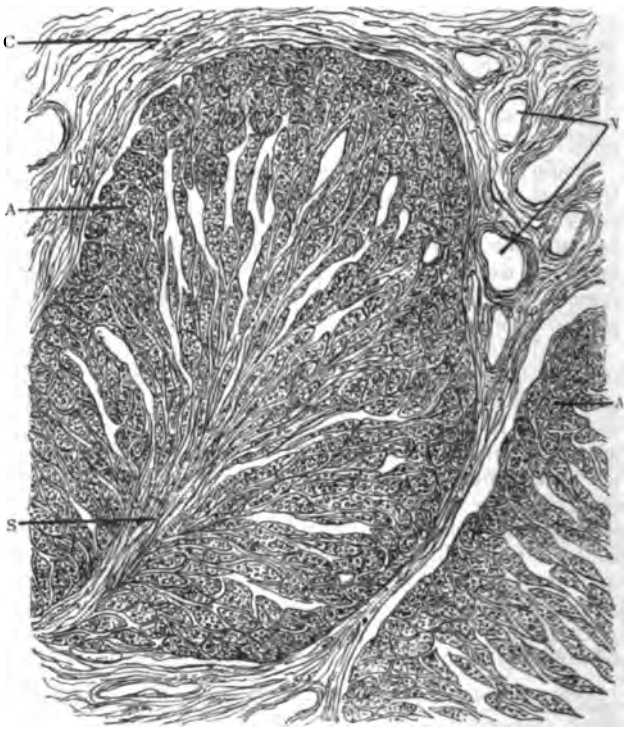

FIG. 2.—C, coarse fibrous connective tissue, with large blood-vessels; V, mainly venous in character; S, septum, or prolongation of connective tissue into a closed space filled with globular and angular corpuscles in rows. Between the rows there are fat-globules and empty slits. A, cellular elements.

Right ovary contains cysts filled with an albuminous liquid. The arteries of the medullary portion are tortuous in a high degree, and their middle coat in a marked waxy degeneration; the stroma everywhere is transformed into dense interlacing connective tissue, the result of chronic ovaritis.

Many persons thought the patient could not survive the operation; but since it was performed she has been constantly gaining in strength and vigor. She looks well, and her nerve conditions are improving. October 10, 1885, she called to see me, and said she had gone to church three times the previous Sunday—walking.

CASE II. *Cronic pelvic peritonitis; pyo-salpinx; ovaritis.*—H. J——, a frail little woman, aged twenty-three years, weight seventy-five pounds, called to see me August 18, 1885. She has been married two years and eight months. Menstruation appeared at the age of twelve; no pain at first, but soon after she had dysmenorrhœa, which gradually grew more and more severe, and the menstrual flow more profuse, continuing eight or nine days. A year after marriage she gave birth to a premature child, seven and one-half months, which lived only a few days. After childbirth she had a severe attack of septic peritonitis, which lasted eleven weeks, since which time she has not been able to go around, constantly in bed, says the slightest exertion prostrates her, that she "suffers constantly with pain and soreness in the pelvis; sharp piercing pains darting and shooting up through the rectum, not a day that she does not feel these piercing pains, frequently many times during the day; that for seven years she has suffered thus, had every

thing put on to draw the inflammation out;" now, she says, "she is willing to go through anything for the sake of being well." Her temperature and pulse were 99½° and 100 respectively.

I examined the pelvic organs, and found the cervix lacerated, excessive tenderness in the region of the ovaries, tubes enlarged and evidently fixed by firm adhesions.

At once. there seemed to be no other way of relieving her sufferings or curing her than by the removal of the uterine appendages. Still, while preparing her for the operation, I determined to see if treatment could not, according to the statement of some, cure her, and so supersede the necessity of an operation; for if anyone should be, saved the dangers of an operation it was this frail, feeble little woman. One of our most distinguished gynecologists says some cases of tubal and ovarian disease can be cured by repeated applications of Churchill's tincture of iodine, hot douches, etc. I tried faithfully these, and, as I thought, all other recognized and approved means. The patient was in my private hospital, and everything was constantly done to improve her special and general condition. Her health grew better, and she seemed much improved in many respects, there was less peritoneal inflammation, the adhesions stretched and softened, yet, after all these three months of persistent and careful treatment there seemed to be just as much soreness and tenderness about the ovaries, the tubes seemed to be even more enlarged and prominent, the darting pains just as severe and frequent, the movement of the bowels just as painful, and the patient no more able to be out of bed. There was now as much necessity for the operation as there was three months previously. Her life was in peril without it. The patient was anxious and impatient for it to be performed; many times when other patients were to undergo operations she would wish it was her; often said, "she wanted her ovaries taken out." October 29th we commenced to prepare her especially for the operation, and on the 31st it was performed. I made the usual incision of two and one-half inches, the abdominal walls bled freely, and there was great difficulty in getting out the appendages on account of strong adhesions. Both tubes were firmly adherent by their extremities, and throughout their whole extent to the ovaries, and were very much dilated and filled with fluid. Their transparent attenuated walls seemed ready to burst. The pedicle on each side was firmly secured, appendages removed, and the peritoneal cavity washed out, but there was so much, and such continued oozing that a drainage-tube was put in. At 9.30 same evening, temperature 101°, pulse 130; fifth day, temperature 99½°, pulse 100. The tube was repeatedly washed out and the dressings changed, considerable bloody serum oozed out. On sixth day glass tube was removed and a small rubber tube inserted in its place. Eighth day, sutures removed; the patient seemed well, temperature and pulse almost normal, appetite good, and she *relieved of the pain* from which she had long suffered, yet the fistulous tract did not heal; there continued to be a small sinus from which constantly issued a slight discharge.

One day, some two months after the operation, as I was pressing the sides of this fistulous canal to see the quantity and nature of the discharge, there burst out a small white mass, which, upon examination, proved to be the ligature of one of the stumps—there was the Staffordshire knot exactly! The lower end of the drainage-tube had in some way become displaced toward the right side; probably in this way the ligature had become injected and was consequently expelled. Soon after the passage of this ligature the fistulous tract healed, and there was no further trouble.[1]

May 20, 1886, her husband writes that she is feeling splendidly; that he could not have imagined that she ever could be as well. May 30th, she wrote: "Doctor, you have given me my life, and what is more, an interest in life."

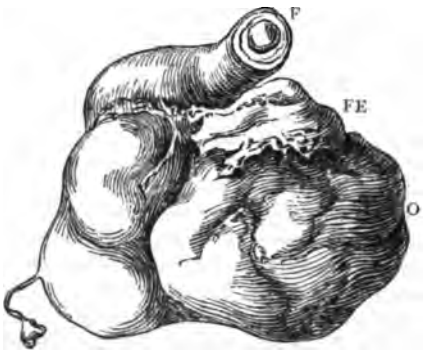

FIG. 3.—Representation of the structures after they had laid in chromic acid three months. O, ovary with deep cicatricial furrows; F, fallopian tube with marked convolutions and cystic enlargements; FE, fimbriated extremity of the tube firmly attached to the ovary.

Microscopical section of the left ovary revealed the presence of rather dense fibrous connective tissue, interlaced with small bundles of smooth muscle-fibres; follicles scanty. Ovary has the appearance of senile involution (M. I.). Microscopical section from the right ovary exhibits acute inflammation, arteries dilated and extremely tortuous (C). The tubes were in a state of chronic pyosalpingitis.

FIG. 4.

When we examine these structures we see how completely their physiological functions were destroyed. Even if we had aspirated the tubes, and so drawn off the pus, the ovaries were so diseased, the lining membrane of the tubes so changed, and there was such a desquamation of the epithelii, that there could not possibly have been any true functionating power. And the aspirating or opening and draining would have been as dangerous as the operation for removal, and there would still have been left the diseased structures to give trouble and distress, and be a cause of serious complications.

By this operation (Tait's) many cases can be restored to health who must otherwise suffer and die. I can now look back upon a practice of years, and remember many whom I could have cured if I had known of this operation at the time.

CASE IV. *Chronic ovaritis; Abscess of left ovary; Pyo-salpingitis*—Mrs. D——, a delicate young woman, twenty-one years of age, married two years, no children; menstruation commenced at the age of thirteen, from the first it was accompanied with great pain, the pai commencing two or three days before the flow. After marriage dysmenorrhœa was much increased; she had an attack of gonorrhœa, which inflammation and infection extended through the tubes, causing inflammation so severe that she had to keep her bed the most of the time. When first seen by the writer she had been confined to her bed for some weeks, the whole pelvis was sore and tender, on each side of the uterus was a mass low down and extremely sensitive. In appearance the patient was small and imperfectly developed, there was no breadth or depth to the pelvis, and an apparent lack of

[1] Last October McBurney, of New York, performed the radical operation for hernia, using six silk ligatures; there remained two sinuses. On April 9th, in cutting down he found the ligatures had not been absorbed. March 26, 1886, Dr. C. N. D. Jones performed same operation for an enormous hernia. A small fistula remained. May 20th the wound was opened in the line of the old cicatrix and the unabsorbed ligature removed, after which the wound healed rapidly.

vigor in every organ. She was removed to my private hospital, November 11, 1885, not able to sit up, had a quick, feeble pulse and a high temperature. She was placed immediately in bed, and had constant care day and night. By treatment the size of the mass was reduced, adhesions softened, and much of the sensitiveness relieved. The patient in every respect seemed in a very much better condition, had a good appetite, was able to be around, and was feeling comfortable. Some would have pronounced her "cured without an operation," but we knew the causes were still existing, ready to give trouble at any time.

The patient was very anxious that the diseased structures should be removed, though in some way she became fully impressed with the idea that she would not live. January 23, 1886, I performed the operation for the removal of the appendages, assisted by Dr. W. G. Wylie and Dr. C. N. D. Jones. Dr. Ingals administered the ether. The ovaries were large and adherent. Right ovary was first removed, it measured 2½ inches; the left one measured 3⅛ inches. In lifting the left ovary an abscess in the ovary burst, discharging a thick, greenish-yellow pus, some of which escaped into the peritoneal cavity. The cavity was well washed out, but the continual oozing from the broken adhesions made it necessary to put in a drainage-tube. For a long time after being placed in bed the patient seemed to be in a condition of extreme surgical shock, which lasted some hours. Her external surface was cold and clammy. Two attendants continued rubbing her for more than an hour before reaction was fully established. Her pulse continued to go up, and by next morning it was 170 per minute, and soon grew so rapid that it could not be counted; temperature, 101⅓°. By 11 P.M. the day after the operation her pulse was again 170 per minute; temperature, 101½°. Tube was washed out. On third day at 8.30 A.M. her pulse was 160; temperature, 100⅓°. Pancreatized milk was given by the rectum. Fourth day—pulse, 120; temperature, 101⅝°. Nausea and vomiting still continued; at 9 A.M. vomited dark fluid; gave seidlitz powders; washed out the tube, no vomiting after. Up to this time she had taken ten seidlitz powders. They had produced no operation on the bowels, yet in some way they seemed to have the power of destroying or carrying off the microbes, and so preventing any septicæmia.[1] From this time the patient began to improve rapidly, and Saturday morning, a week after the operation, she looked brighter, better, and stronger than she had looked for months. Seventh day the glass drainage-tube was removed and a small rubber tube inserted in its place, which was removed at the end of another week, and before the end of the third week the opening was entirely closed and the wound healed. Twenty-second day after the operation the patient left the hospital, rode three miles to another part of the city, stepped lightly from the carriage, ran up high steps to the front door, then up a high flight of stairs to the second floor; said "she felt perfectly well; had not a pain or an ache." March 2, 1886, she wrote: "I am feeling perfectly well, never felt better in my life; have an excellent appetite, and am gaining in flesh."

The cause of suffering was removed, which, if allowed to remain, would doubtless have caused her death before many months.

Macroscopical examination: Left ovary very much enlarged, upper surface exhibiting an opening with jagged edges, which led into a pus-cavity three centimetres in diameter, fimbriated extremity of Fallopian tube dilated into a pus-sack. A vertical section through the ovary exhibits two follicles, and in the centre an abscess cavity, with irregular walls. In its vicinity and toward the outer periphery the tissue is discolored, soft, and friable, indicative of beginning suppuration.

[1] On the slightest indication of peritonitis after an ovariotomy we give a rapidly acting purgative, it matters not what (Tait, in British Medical Journal, May 15, 1886).

Microscopical examination: A section from the vicinity of the abscess exhibits a marked infiltration of the tissue with inflammatory corpuscles. Both the myxomatous and fibrous connective tissue are transformed into inflammatory corpuscles to a considerable extent. The smooth muscle-fibres likewise are transformed into such corpus-

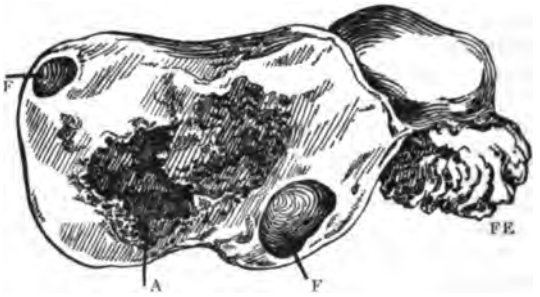

FIG. 5.—F, F, follicles; A, abscess cavity; FE, fimbriated extremity of Fallopian tube.

cles, and in many places rows of the corpuscles indicate their origin from smooth muscle-fibres. This transformation also invades the endothelium and the smooth muscle-fibres of the middle coat of the arteries, which near the apices appear to be completely destroyed. The cortical substance of the ovary not invaded by inflammation is of a marked myxomatous character.

The right ovary is in a condition of sub-acute inflammation. Portions of the medullary substance being transformed into dense fibrous connective tissue, other portions are crowded with inflammatory corpuscles.

Left Fallopian tube exhibits a marked inflammation and infiltration both in the mucosa and in the muscle-tissue. Right Fallopian tube is in a state of acute inflammation, both in the mucosa and muscle-coat.

Comparatively few cases of abscess of the ovaries are reported. In Scanzoni's work, p. 398, is recorded a case of abscess of the ovary; woman died suddenly from rupture of abscess into the peritoneal cavity. Emmet, in the last edition of his work, p. 651, says: "I have seen but one instance of this kind of ovary. A mass, the size of a hen's egg, was felt on left side. February 16th applications of pure carbolic acid was made to the fun-

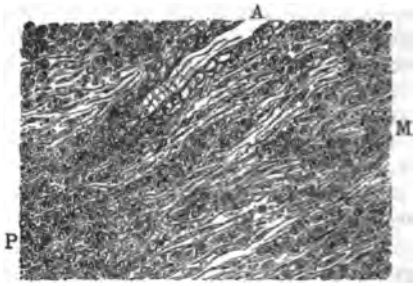

FIG. 6.—Suppurative ovaritis. M, rows of inflammatory corpuscles originating from smooth muscle-fibres; A, artery whose endothelial and muscle-coat toward the lower extremity is completely transformed into inflammatory corpuscles; P, beginning formation of an abscess. x 500.

dus daily by means of an applicator; 23d, sponge-tent introduced, canal dilated, granulations removed, and equal parts of carbolic acid and glycerine applied freely throughout the canal. March 25th, canal partially dilated to facilitate the application of carbolic acid. On 30th, when half awake, she turned suddenly in bed, when she felt something move inside of her, went into collapse, and died." From the autopsy, made five hours after death, the author says: "It was evident the ovary had long been the seat of an abscess."

Thomas, p. 667, quotes a similar case of collapse and death: "A blister had been applied on the hypogastrium, and opium given in large doses, five days after became collapsed and died. Autopsy eighteen hours after death; between the organs a great deal of puriform

serum; left ovary size of hen's egg; in its removal several ounces of pus escaped. No evidence of cellulitis."

Lawson Tait says, in his work on "Diseases of the Ovaries": "Abscess of the ovaries is a condition of extreme rarity, and in the majority of instances probably death occurs from the rupture of the abscess into the peritoneum. The only cases of abscesses of the ovary, in clinical experience of which I have been certain, are two." First case, op. cit., 61: "Left ovary contained two ounces of pus; both ovaries and tubes removed; patient recovered without a bad symptom." The second case, op. cit., 125: "Patient had suffered many years with great ovarian pain; much increased at the menstrual period; the left ovary contained two drachms of pus and appeared to be on the point of bursting into the abdominal cavity. Had it done so she doubtless would have died. Both appendages were removed, and she made a perfect recovery."

In the same work he quotes two cases that were reported in *The Lancet*, 1877. "One had an exploratory incision, patient died a few hours after; the other had an exploratory puncture, symptoms grew worse, and she died some months after." Tait remarks, "It is impossible to resist the conclusion that abdominal section, performed soon after the onset of serious symptoms, would have enabled the surgeon to have relieved his patient."

July, 1885, before the British Gynecological Society, Lawson Tait reported two cases of double pyo-salpinx together with abscess of right ovary. "The lives of both patients had been for months in jeopardy; the operations were of extreme difficulty; abscesses bursted; and very great care had to be taken in cleansing the peritoneum. The patients recovered" (*Brit. Gyn. Journal*).

April, 1886, Tait reports before the same Society another case of abscess of the ovary: "Operation extremely difficult and the hemorrhage severe" (*Brit. Med. Journal*, May 8, 1886).

Edis reported before the same society a successful operation for abscess of ovary.

As far as I have seen the reports, the only patients with abscess of the ovaries who have recovered are those for whom Tait's operation was performed.

Case V.—*Chronic ovaritis; pyo-salpingitis.*—Miss A. Y——, a young woman, twenty years of age, has suffered with constant pain in the pelvis for seven years, greatly increased at the menstrual periods, and at times extremely severe. But the most serious consideration in her case was the unhappy and abnormal manifestations of the nervous system, depression of spirits, and at times the contemplation of suicide. All of which symptoms I believed were largely due to reflex irritation from the thoroughly diseased condition of the ovaries and tubes. When first called to see her I found on examination uterus completely retroflexed and retroverted, both ovaries enlarged, sensitive, and dislocated down into the recto-uterine cul-de-sac. I made known to her her condition and the necessity for an operation. She at once accepted the idea and was impatient for the operation to be performed, frequently saying, "I want *both* ovaries and both tubes removed;" said that "for years she had suffered such distress and agonizing pain that she could stand it no longer."

She was by special and general treatment prepared for the operation. I removed the appendages from both sides of the uterus. She made an excellent recovery, and month by month she is growing stronger and more vigorous, her nervous system more and more normal, and she is enabled to enjoy life and attend to her ordinary duties.

Microscopical examination showed chronic ovaritis and pyo-salpingitis.

Case VI. *Hystero epilepsy; cirrhosis of the ovaries; salpingitis.*—Mrs. M. K——, aged thirty-six years. After the birth of the fourth child her health began to fail; great prostration, and suffering much with her back, constant pain and distress in the pelvis; and there was a history of gonorrhœal infection. The attacks of hystero-epilepsy were gradually growing more serious, her mind was becoming less active, and her perceptions more obtuse. Already her face had the dull, heavy expression of an epileptic. These epileptic attacks recurred at every monthly period; sometimes during the day she would have a continued succession of convulsions, with intervals of only a few minutes, struggling and throwing herself in all conceivable positions; frequently opisthotonus, and showing "le pied hysterique."

It was evident that these spasms or convulsions were caused by some internal irritation; and unless the cause was removed it was impossible for any medical treatment or appliances to help her, or prevent the recurrence of the spasms. Such cases usually tend to idiocy and death.

When I presented to her the hope of possibly relieving her by removing the diseased ovaries, she cordially accepted the idea, and on December 10, 1885, I performed the operation, in my private hospital, assisted by Dr. C. N. D. Jones. Dr. Cary gave the ether. Dr. J. L. Minard was present. The patient recovered well from the ether, and seemed scarcely sick during the whole convalescence from the operation; was up and around at the end of the second week. She has since done well in every respect, showing greatly improved nervous condition, and up to the present time, June 5th, has not had a return of the spasms, and the dull epileptic look is giving way to a more intelligent countenance.

Macroscopical examination: Ovaries small, hard, and nodular. When cut open they were markedly cirrhotic, composed entirely of coarse fibrous tissue, interlacing. Almost the whole gland-structure was replaced by cicatricial tissue. In the left ovary was seen the remains of only one follicle; in the right there were three, all of them located near the outer end of the ovary. The tubes were dilated into three cyst cavities and there were several small parovarian cysts.

Microscopical examination: Left ovary almost entirely transformed into dense fibrous connective tissue; no healthy gland-structure left. Right ovary, especially in its medullary portion shows, in some places, inflammatory infiltration, crowded with inflammatory corpuscles, while in other parts the ovarian tissue is transformed into dense fibrous connective tissue. The condition is sub-acute ovaritis. There is a marked dilatation and tortuosity of the blood-vessels, most of the arteries showing hyperplasia of the middle coat with marked waxy degeneration. The tubes are in a condition of well-pronounced salpingitis, both in the mucous and muscular portion. The tubal arteries show hyperplasia of the muscle-coat.

I conceive that nothing else would have relieved the spasms. No amount of bromides or massage—nothing but the removal of these diseased organs—organs which had organically changed in structure, which could no longer perform their functions, and hence were a source of irritation.

Case VII. *Salpingitis; ovaritis.*—M. S——, twenty-six years of age; married six years; two children, the youngest fifteen months old. She complained of great pain in her back, in her pelvis, and down her thighs, and so much bearing down, heaviness, and distress that she could not rest night or day; could not attend to her duties; was always tormented with this constant suffering. She had done everything to find relief. The cervix had been twice sewed up, the perineum had been restored, and lately the patient had spent seven months in a hospital, and the womb had been treated *ad nauseam*. Still her sufferings were just as great, as constant, and as continued. On examination I found the uterus completely retroverted, lips of the cervix gaping wide apart and covered with hard cicatricial tissue, the ovaries very tender and dislocated down into Douglas' cul-de-sac.

She entered my private hospital January 20, 1886. I sewed up the lacerated cervix for the third time, in hopes possibly of relieving some of her nervous symptoms, and as a little recreation to her while she should be prepared

for the more serious operation. Such was her nervous excitability that she had to be chained by some thought. I informed her that this operation would not relieve the great distress, and eight days after she pretty clearly informed me of the same fact; but the operation was an entire success, the wayward walls of the cervix were brought into perfect and easy coaptation, and there they will stay, a specimen of good workmanship! Wound healed by first intention.

The operation for the removal of the appendages took place February 10th. Present, Dr. C. N. D. Jones and Dr. Ingalls. Before the operation the husband informed me that "the desire for a family was nothing compared to the distress of seeing her constantly suffer." I know the mild-mannered man had groaned under her tantrums, and felt that he could not live with her and her two ovaries, too. The appendages were removed from both sides. The ovaries were atrophied, and had evidently been the seat of long-standing inflammation. Third day after the operation the patient was singing, and said she felt well enough to get up. As days passed on she perceived she was free from the old distress that had followed her for years. At the end of sixteen days she was discharged from the hospital, well.

I saw the patient May 6th. She was the picture of health; happy, cheerful, and active in her household duties; said she felt perfectly well, had no pain or distress.

Many suppose this operation renders a woman sterile, but we must bear in mind that she is already completely sterilized by disease. The operation takes away the cause of suffering, and enables the patient to lead a life of usefulness and activity, instead of suffering long years of invalidism.

Macroscopical examinations of specimens: Both tubes present an anomalous appearance. Each is lifted from the central portion outward, having two distinct sets of fimbriæ; the lumina of the twin tubes remain separate to the point at which they were severed from the uterus, and probably continued so until they communicated with the uterine cavity. The walls of the tube are much thickened, together with the meso-salpinx; in the latter there are numerous small cysts. The ovaries are small and atrophied. Nearly the whole portion of the left ovary is occupied by a large cyst.

Microscopical examination: Both ovaries are in a state of acute and subacute ovaritis, groups of inflammatory corpuscles mainly in the cortical portion. The arteries of the left ovary are in a state of waxy degeneration, and the stroma contains a large number of amylaceous corpuscles. Both tubes are in a state of acute salpingitis; both in the mucosa and muscle-coat there are groups of inflammatory corpuscles.

Case VIII. *Salpingitis; ovaritis; ovarian hæmatoma.*—Miss L. S——, aged twenty-three, has been suffering with pain in the pelvis for the last five years, very much increased at the menstrual period. Menstruation commenced at the age of thirteen. She suffered agonies, not only during the period, but for three or four days before; and for the last two years has been unable to attend to her ordinary duties.

She called to see me February 20th. On examination I found the uterus anteflexed and bound down by adhesions, and a large inflammatory mass low down on each side of the uterus. By treatment the conditions were very much ameliorated, and on March 27th she entered my private hospital, and on the 31st I performed the operation for removing the uterine appendages, assisted by Dr. C. N. D. Jones. Dr. Ingalls administered the ether. The abdominal walls bled profusely, and there was great difficulty in getting out the ovaries on account of dense and firm adhesions and extreme shortening of the broad ligament. She recovered nicely, with no drawback except unusual nausea and vomiting, probably due to chronic dyspepsia and an enlarged liver.

Macroscopical examination: The right ovary on one surface presents a ragged opening leading into a cavity three centimetres in diameter, which contains a large clot of blood, and is therefore the seat of a *hæmatoma saccatum*. The other portion is in a state of cystic degeneration.

In the left ovary there is *not the least vestige of normal ovarian tissue*, nor is there a single graafian follicle, or normal corpus lutea; the whole is occupied by an infinite number of small cysts, the larger of which is about one centimetre in diameter.

In the right ovary, stroma transformed into fibrous connective tissue to some extent, other portions occupied by inflammatory corpuscles; sub-acute ovaritis; waxy degeneration of the arteries; corpora amylacea.

Case IX. *Ovaritis; abscess of right ovary; chronic salpingitis; endo-arteritis (syphilitic?).*—M. B——, twenty-four years of age, unmarried. Menstruated at fifteen; before the appearance of menstrualin was subject to attacks of dizziness. The last five years she has suffered with almost constant pain in the pelvis, very much increased at the menstrual periods, and for the last three years the intense pain has commenced a week before the flow, and continued during the period, being so sharp and severe that she has had to keep her bed lately most of the time.

She was sent Febraury 10, 1886, by one of the consultants to the Woman's Hospital clinic. On examination I found the whole pelvis exceedingly tender, the slightest pressure from the outside causing pain; the uterus was acutely anteflexed and the appendages drawn up by adhesive inflammation. While in the Woman's Hospital she was treated, the uterus dilated, etc., but the menstrual pain continued just as severe, and her sufferings just as constant. April 3d she was admitted into my private hospital, and on the 6th I removed the uterine appendages. There was great difficulty in the operation, on account of many and firm adhesions, and during the operation an abscess in the right ovary burst. The peritoneum was carefully washed out and the patient made an excellent recovery, and is now relieved of that almost constant pain and suffering which was exhausting her strength and making an invalid of an otherwise healthy woman.

Macroscopical examination: The ovaries and tubes are much enlarged; in the right ovary there is a large cavity, 1.5 ctm. in diameter, the contents of which escaped during removal. In the left ovary, at the distal extremity, there is a cystic protuberance, which, on section, is found to contain a grumous fluid, which being placed under the microscope shows pus-cells and débris.

Microscopical examination: Left ovary—The whole stroma is transformed into fibrous connective tissue, the bundles of which are freely interlacing. Some portions of the tissue are in a state of high waxy degeneration. The arteries in the middle coat are also in a state of waxy degeneration, the calibres of which are much narrowed, or nearly obliterated, owing to an outgrowth of the endothelia, which is the characteristic feature of chronic endo-arteritis. The tissue is crowded with amylaceous corpuscles. Diagnosis, chronic ovaritis; waxy degeneration of the newly formed connective tissue and of the arteries; corpora amylacea.

Right ovary contained a small abscess, with characteristic appearances.

Left Fallopian tube—The epithelium is preserved to a large extent, but is mostly destitute of cilia. The connective tissue is slightly augmented and of a delicate fibrous structure, in some portions with a waxy gloss, in other portions crowded with inflammatory corpuscles, also slightly waxy. Most of the arteries in their middle coats are enlarged and in a high degree of waxy degeneration. The calibre of some arteries is crowded with inflammatory corpuscles, a feature of endoarteritis. Both in the epithelial and connective-tissue layers numerous highly refractory structureless corpuscles are scattered—so-called corpora amylacea.

Right tube—The features clearly resemble those of the left; arteries dilated and tortuous; waxy degeneration; corpora amylacea.

Each of these patients had metrostaxis, and no appearance of menstruation since.

The microscopical examination of the appendages shows that each patient had *ovaritis* in some stage; some of them probably commenced menstrual life with ovarian congestion. The first case had hyperæmia of the ovaries when very young, which soon passed into acute ovaritis, then into a more chronic condition, then into cystic degeneration. The second case, an unmarried woman, suffered for years with acute and chronic ovaritis, long before the sarcoma was developed. The fifth case, also a young unmarried woman, had for years an inflammatory condition of the ovaries. The third case had evidence of acute and chronic ovaritis long before the complications of puerperal peritonitis. The fourth case, a young married woman of twenty-two, probably had ovaritis for nearly half of her life. The ovaries of Case VI. show in some portions chronic ovaritis, in others subacute, and in other portions a cirrhosed condition, which was the outcome of long-standing inflammation. In the seventh case the ovaries were cirrhotic and atrophied. The eighth and ninth cases, both single women, had ovaries organically diseased; in one there is not the least trace of normal ovarian tissue left, while in the other the whole stroma is transformed into fibrous connective tissue.

McBurney is often quoted as having said, "That it would be difficult to point out a single well-authenticated case of acute ovaritis out of the condition of pregnancy." The same idea seems to be repeated in most of our standard gynecological works. "The ovary is seldom the seat of inflammation except as the result of childbirth" (Emmet). "Acute inflammation of an unimpregnated ovary is of such rare occurrence that no case has come under my care" (West and Duncan). "Acute inflammation and abscess of the ovary is a condition rarely met with in practice" (Hewitt). "We have had but a single opportunity of studying non-puerpural acute ovaritis upon the cadaver" (Scanzoni). "Acute ovaritis is quite rare, except as a complication of peritonitis and cellulitis" (Thomas). The first-named author further says: "In attacks of peritonitis and cellulitis the ovary may have been only scorched in the general conflagration;" that "the ovary is scantily supplied with nerves, and the pain that is so frequently experienced in the neighborhood of the ovaries has no direct connection with the ovaries." So even our classical "ovarian irritation" is a delusion! Bennett says: "In nineteen cases out of twenty in which the ovarian region is the seat of a dull, aching pain, and apparently tender and swollen, there is no actual ovarian disease; the symptoms are almost invariably the result of some uterine lesion." Another English writer says: "In many cases the symptoms are purely neuralgic in character, independent of any local lesion;" that "pain is the patient's ailment," —"just like the back-ache which bears so large a part among the minor ills of women; and any treatment that directs the patient's attention to the seat of suffering is apt to perpetuate the evil instead of removing it." "Pain is the patient's ailment!"—thus this eminent author speaks of this formidable disease, which is so little understood. Yet it remains just as much a fact that there are unnumbered instances of both acute and chronic ovaritis, a countless number of women suffering years of martyrdom from disease of the organs, wearing out their lives, and the cause of suffering, never recognized, remains a secret which the grave finally covers, unless, perhaps, discovered at some post-mortem, and then not very much to the advantage of the patient. Scanzoni tells of a woman who died of pneumonia; at the autopsy it was discovered that "the ovaries were enlarged, effusion into the follicles, and in the parenchyma small abscesses of various sizes, all containing sanious pus." These conditions were not suspected before death. West and Duncan tell of a similar case. A woman died of bronchitis and emphysema; at the autopsy "the appendages were found matted together by firm adhesions, one ovary atrophied and the other enlarged by a cyst filled with grumous blood." The medical attendant imagined no trouble in this direction. The same author gives other similar cases. Hennig states that out of *eighty-one* post-mortems, a diseased condition of the ovaries was found in *fifty-three*, not only showing how frequent is the disease, but how infrequently it is recognized. Another author states that out of *sixty-six* post-mortems, in *twenty-one* the ovaries presented changes due to inflammatory action. In Dr. Wylie's clinic at the Polyclinic one-twelfth of the cases were diagnosed as having tubal and ovarian disease. Two years ago, Martin, of Berlin, reported that he found one in fifteen with diseased tubes. So other uterine clinics may show as many or more of these diseases if the diagnosis is as accurately made. Martin says, "The diagnosis receives too little attention;" probably not all are diagnosed.

But, whether recognized or not, there are still many cases of ovaritis, acute and chronic, from whatever cause they may be produced. If by septic poison, this septic poison may originate from other conditions of the system than the puerperium or from peritoneal inflammation. In a large majority of instances I believe *the ovary is infected by the unhealthy secretions from the uterine cavity*, which find their way through the Fallopian tubes to the ovary.[1] The ovary is more liable to, or in more danger of, this septic poison from the circumstance that, when an ovule escapes, there is left behind a funnel-shaped cavity, as if to invite or drink in the poison. The only wonder is that the ovary is not more frequently infected and diseased. The infection of the ovary from this cause is rendered yet more easy by any fusion or flexion of the uterus. In cases of flexion, especially, the uterine secretions to some extent almost necessarily find exit through the tubes, so infecting both tubes and ovaries.

The normal position of the uterus and its appendages is the most favorable for avoiding these possible dangers, which is also helped by the anatomical structure of the tubes, the longitudinal and circular fibres producing the peristaltic action which tends to force the secretions back into the uterus. Also the ciliated epithelii of the tubes aid in preventing fluids from passing into the peritoneal cavity; these millions of cilia may blow along the microscopical egg to its possible resting-place, also "hinder the contact of the spermatozoa with the ovum until the latter has reached the cavity suited for its maturation." Yet another *important function* of these ciliated epithelii is to *prevent fluids and noxious secretions from reaching the pelvic viscera*,[2] just as the cilia of the breathing organs hinder dust and dirt and other contaminations from reaching the lungs. I have watched the cilia in the living oyster, like millions of flashing diamonds, producing such currents in the water as bring necessary food to the inert mollusk. In the Fallopian tubes the cilia are no less effective, nor is their function less important. But young women, by a universal custom, push down, bind, or displace the uterus and its appendages, the *cilia can no longer do their duty*, the contagion finds an easy entrance, then commences a course of disease continuing and lingering for years.

I have a patient—a magnificently developed young woman—eighteen years of age. She should be the very picture of health, but her blanched lips, pale and agonized face, tell a different story. She says for years she has had such an *aching*, from which she is never free. When a little girl of fourteen she often leaned her head upon the desk and said, "What is it?" On examination I found the uterus completely retroverted, the fundus reached the lowest point in the pelvis, and was bound down by inflammatory adhesions; left broad ligament shortened and thickened; organs enlarged, extremely

[1] The uterine discharges are sometimes exceedingly noxious. "In a woman who died of pneumonia, the whole internal surface of the uterus was covered with puriform pus, which was continued along the whole tract of the Fallopian tubes."

[2] It has lately been demonstrated that the epithelii in the uterus are ciliated, which further helps in this wonderful work.

tender, and dislocated low down into the retro-uterine cul-de-sac. Her vital organs were compressed and pushed out of position, and this displacement allowed the noxious secretions of the uterus to pass readily out through the tubes, and so infect the ovary, causing disease and enlargement, which last favored the dislocation. Another young lady called to see me, same age, and equally well developed—a pupil in one of our fashionable schools. She had a small, anteflexed uterus, and back of it the ovaries and tubes bound up in one mass of peritoneal inflammation, which inflammation was doubtless caused by the unhealthful and catarrhal secretions passing from the uterus through the tubes. A young lady, twenty years of age, called at my office. She had been treated for anteflexion. So extreme was her suffering during menstruation she had to keep her bed. But her trouble was *beyond* the flexion—probably *caused by it.*

There are many such cases, young women suffering from more or less disease of the appendages. They may put on their bright attire, their cheeks are flushed, they look well,[1] yet the cause of suffering is there. We see proofs of the frequency of these conditions in the number of married women who are incapable of bearing children. Marion Sims says, "Every eighth marriage is sterile." One woman whom I was called to see had been married ten years; no children. She had been much treated for dyspepsia, but for years had suffered pain and distress in the pelvis; a mass of disease was in the region of the appendages, and *there* was the trouble and there was the cause of her sterility, all resulting from infectious discharges. A young married woman called to see me; no children. Tubes swollen and adherent, derived from unhealthful uterine discharges. But in this case the discharges were *gonorrhœal;* more serious, more quickly infecting, and most disastrous of all! So young, so lovely, and her life so blighted! Sad that mothers, daughters, reared so tenderly, should be exposed to such a *vile danger.*

About the same time I was sent to see another patient. Found the appendages wrapped in a mass of inflammation, from septic poison from the puerperal state. Laying both hands upon the pelvis, she said, "Such a misery!" She had been suffering from it since the birth of her last child, eight years ago. Now she is confined to her bed most of the time, yet during these years she has been treated by various reputable physicians and surgeons for "womb disease." "When will we learn that all the ills of womanhood are not due to inflammation of the neck of the womb?" Many are treated for "womb disease," when the trouble is with the ovaries and tubes; probably the appendages are more frequently diseased than is the uterus. Meigs said, more than forty years ago, "Disease of the Fallopian tubes is many times unsuspected, when it is the cause of disease treated under another name."

But there are many other causes or conditions that are constantly operating to produce disease of the ovaries or of the uterine appendages; cold feet and extremities and imperfectly clad limbs tend to, and must necessarily produce, some form of congestion. Some of the most serious forms of pelvic congestion, or inflammation, result from a disturbance of the peripheral circulation. It should not be supposed that women are able to stand more exposure than the opposite sex, yet many of them go out with one thickness of muslin around their lower limbs, when the opposite sex will be found to have double and treble thicknesses of woollen goods. As one writer says, "Only fools and beggars take cold." No doubt this one cause, unbalancing the circulation, has produced many instances of disease of these important structures. There is a chill, symptoms of fever, and the trouble has commenced, more serious if during the period of menstruating. Scanzoni says, "We must seek the causes of ovaritis in some disorder of menstruation;" but *ovaritis will cause these "disorders."*

Another cause of frequent disease of these organs is nervous excitement during the developing period of life, exhausting the vitality when nature needs all the vital resources for maturing and growth. One of the saddest instances of this was a woman, twenty-five years of age, broken down with tubal and ovarian disease; her strength was used up—she had lived in a whirl of dissipation and mental excitement.

In the daily habits of young women there are many causes of ill-health, all having the tendency to react upon the condition of these vital organs. And when we think of the fine organization and exquisite structure of the ovaries, their important and complex functions, that they are performing the highest physical function[1]—perpetuating the race, elaborating that growth that by differentiation will develop into the most complex animal organization—and that while performing these important functions there is a certain amount of physiological hyperæmia, is it any wonder, especially when we consider the thousand untoward circumstances of woman's daily life, that these exquisitely delicate organs, while performing these complicated functions, repeated every month, should take on morbid conditions—that this physiological hyperæmia should be changed into unphysiological hyperæmia, congestion and inflammation? As they have a fine organization, they are apt to suffer more seriously.

During the function of ovulation young women should as much as possible rest in bed, just as for every one rest after a meal is promotive of good digestion, and the digestive process will go on more healthfully. And as there is no physiological function higher or more important than ovulation, so the more reason women should rest, especially when we consider the miserably inherited bodies which many of our American women possess, bodies that are poorly cared for, and have very little vitality. When we consider this, more especially is there need for rest during this period. But, let it be understood, there are many magnificently constituted women who can go forty or fifty years, severely taxed all the time, never resting during menstruation, yet never experiencing the least trouble, distress, or sensation in the performance of the ovarian function; just as there are a countless number of men, for as many years, amid their business activities, who never think of their stomachs or have any trouble therewith, while there are millions of others who have as many diseased peptic glands as there are diseased follicles in as many ovaries.

I have spoken of the *causes* of these diseases, and incidentally of their *prevention;* now a word as to their *cure.* How can these diseased conditions be relieved? Our standard English gynecological author, speaking of the pain in the region of the ovaries, says: "It is very hard to cure; leeches do not relieve, blisters sometimes afford ease, chloroform applied to the site generally gives temporary relief, so may camphor liniment, extract of belladonna," etc.; then adds: "I have never been able to trace the permanent cessation of suffering to the unaided use of any local means."

For the second patient mentioned, with anteflexion of the uterus and inflammatory masses on each side, probably much may be done: the adhesions may be softened, the peritoneal inflammation reduced, acute salpingitis relieved. But after all this is done there yet may be found an ovary that is more than "scorched in the general conflagration."

The patient who has enlarged and adherent tubes—shall we aspirate, run the risk of wounding vital structures and poisoning them with septic material, or shall we first open the abdomen to be sure it is hydro-salpinx, and if it is, then aspirate?

The enlarged tubes of the patient with gonorrhœal in-

[1] September 20, 1884, Lawson Tait operated on a patient in Bellevue Hospital, "of *very healthy appearance*, yet for years her life has been one of prolonged misery. She had a malady that is often fatal" (New York Medical Journal).

[1] "All the facts of comparative anatomy indicate that the female organism is in advance of the male" "Within the ovary there is ceaseless activity, changes as subtle and eluding as the vital principle itself" (Coe).

fection are without doubt filled with pus, even the fimbriated extremities are possibly distended into pus-sacs and closely agglutinated to a diseased ovary, the cilia desquamated, and the lining membrane changed. Can such organs be restored to health, or to their normal function?

How shall we help the last-named case with enlarged tubes and ovaries diseased from septic material of the puerperal state? She has grown gradually worse under the varied treatment of many physicians.

In the young woman with dislocated ovaries, the first patient mentioned, treatment has removed lymph-like adhesions which bound down the uterus; but how are the ovaries to be held in position? By broad-brimmed pessaries? Who has succeeded? Where are the pessaries that will hold them in position? The patient is on the eve of a brilliant marriage. Shall we leave the ovaries to "give her the chance of some future baby"[1]—leave the woman with the certainty of future trouble, the possibility of being permanently invalided? Even if the ovaries are healthy, the tubes may be so changed in structure, or so misplaced by adhesions or some shortening, that they "cannot acquire their periodic relations to the ovary," any one of which conditions will be a cause of sterility. Shall we resort to Imlach's suspensory operation, oöphorraphy,[2] by which the ovary is stitched up to the infundibulo-pelvic ligament? An ovary so displaced and so sensitive is doubtless very much diseased, and from the history of the case we would judge the ovaries had been long and profoundly diseased, and consequently must have undergone certain organic changes, and where would be the good of stitching them up? Lawson Tait, who is the best authority on this subject said: "When there is really chronic inflammatory disease of the ovary, no such operation can be expected to be successful." Soon after the report of Imlach's operation appeared in the *British Gynecological Journal*, Dr. Paul Mundé, of New York, sent me the following note in reply to a letter of inquiry I had sent him: "I should feel doubtful whether in reality such an accurate anatomical adaptation could be secured as to facilitate or permit conception as Imlach intends. It seems a considerable danger to incur, merely to retain in *approximately* normal position a prolapsed and perhaps an already diseased ovary."

If we leave the ovaries as they are, it is leaving the patient with a source of misery and suffering, probably in time may compromise her life; or, if she marries, she will not only be sterile, but unable to submit to the marital relations.

Were she a dispensary patient, a young girl who by labor had to earn her own bread, and for whom it did not count much whether she had children or no, to save all future trouble and suffering, to enable her to be a useful member of society, to enable her to do her daily work, and to prolong her life I would at once advise the removal of the uterine appendages. And, after all, what better can be done for this patient? Bantock said (November 11, 1885) "he knew of no remedies which had the slightest effect upon a diseased ovary." Lawson Tait said, the same date, "his own experience was that an ovary once inflamed and adherent, the disease was practically incurable save by removal (*British Gynecological Journal*, p. 383).

But lately there is a great hue and cry about the possible future baby. They do not stop to think of the countless number of women who are barren and childless for years from various forms of uterine disease—"a drop may stop a dynasty." When women are suffering from hopelessly diseased tubes and ovaries they must not be "unsexed," they must continue years in torment and misery and inability for any kind of employment or avocation, because perhaps in the diseased ovary there may be a healthy follicle, which may contain a healthy ovum, which may find its way through a possibly diseased tube, and *possibly* find other favorable conditions—like Mrs. Toodles who purchased a door-plate on which was cut the name of Thompson, because she might have a daughter, she might grow up, and might marry a man by that name. Removing diseased uterine appendages is not unsexing a woman, it is restoring her from helpless invalidism to all the possibilities and opportunities of life and labor. It is not taking away the possibility of her having children—that has already been done by disease—it is only removing a cause of suffering. In 1882 a young woman, twenty-seven years of age, was brought to me from Maine, married at fifteen, and again at twenty-two; no children. Uterus retroverted, bound down by firm adhesions, and the appendages wrapped up in a hopeless mass of disease. Thus she had been suffering for years. Hystero-epilepsy and other grave nerve-symptoms were developed. To relieve the constant pelvic pain, and possibly also to relieve some of the nerve-symptoms, I advised the removal of the uterine appendages, but was met by the objection, not only that a former medical attendant had advised a long course of treatment by bromides, etc., to cure her "nervous diseases," but mainly the objection to removing the uterine appendages was that she would be rendered sterile, that we would "take away her capabilities of having children!"

A few months, after I removed the uterine appendages, and below we have a representation of them. We see how completely all functional action must have been destroyed.

FIG. 7.—Ovary, posterior aspect: C, cyst: FT, tube flattened out, closely adhering to cyst. Fimbriate extremity glued to ovary.

The right ovary is enlarged, containing a cyst. The fimbriæ have disappeared from the adherent tube, and its extremity is closely glued to the ovary. Only small remnants of ovarian stroma left, and under the microscope the remnants are found to be in a *thoroughly atrophic* condition, cirrhotic atrophy, mainly consisting of dense fibrous connective tissue, in which are many small amylaceous corpuscles. The free arteries that were left were in a state of waxy degeneration. Thus *all normal structure* was *utterly* destroyed, and any physiological function would have been entirely impossible.[1]

Winckel is quoted in a late number of the *Philadelphia Medical News* as saying: "The time is not far distant when the extirpation of the healthy ovaries for the cure of dysmenorrhœa, ovaralgia, epilepsy, hysteria, etc., will stop." But, Mr. Winckel and Mr. Rip Van Winkle, women with these conditions do not, as far as observation goes,

1 Routh: British Gynecological Journal.

2 The stitching up of the ovary was suggested to my mind when, three years ago, I read Tait's method of stitching up the uterus, and doubtless his mind traversed the whole field.

1 This case was reported in the American Journal of Obstetrics in 1884; the microscopical examination was not given. In the report I drew the following conclusions: "1. The operation should have been performed on the patient years before. 2. There was no other way to relieve her than by the operation. Soon after the publication of the article I received a letter from Lawson Tait, Birmingham, Eng., in which occurs the following sentence: "I agree with your conclusions concerning the case absolutely. The whole gist of modern abdominal surgery lies in an earnest and continuous plea for early interference. There can be no doubt that the only fear about such cases is that they are allowed to go on so long without operation."

have "healthy ovaries." I have never seen the ovaries removed in a single instance but they were more diseased than the symptoms had led me to suppose. Dysmenorrhœa may come from other causes, *but often* it results from a hopelessly diseased condition of the appendages. Incurable epilepsy may and has been helped by these surgical procedures. Hysteria may demand it, and ovaralgia is only an unmeaning word to sum up the suffering that may come from diseased ovaries and tubes; and these sufferings and this irritation may be so great as to render abnormal the mental conditions.[1]

There is no advance made in modern surgery that will do more good, save more lives, or relieve more suffering, or add more to the sum of human life or human happiness than this one operation, known as "Tait's operation." It will save more lives than ovariotomy, because more need it.

In 1847 the eminent and distinguished Charles D. Meigs, Professor of Midwifery and Diseases of Women in the Jefferson Medical College at Philadelphia, reported a death from Fallopian pregnancy. Twenty hours after death, when inspecting the abdominal cavity, he said, "What, alas, can we do in these cases? We could make an incision and clean away the coagula and the serum. But who is he bold enough to do so? Who is he astute enough to discriminate with so much clearness as to warrant him in the performance of gastrotomy for Fallopian pregnancy? There is no such wise and bold surgeon."

But there is, and this wise surgeon has led us out of this wilderness of doubt to the clear light of what is best to be done, and showed us how to do it successfully.

Clinical Department.

TREATMENT OF WHOOPING-COUGH.

Dr. E. W. Hedges, of Plainfield, N. J., writes: "In an editorial of July 31st you speak of various recent methods for the treatment of whooping-cough. One of these plans I have tried quite largely in my own practice, and with such gratifying results that I venture to send you a short account of it.

"The remedy used was resorcine in a two per cent. solution, as recommended by Dr. Moncorvo, of Brazil, and the method of applying it was by a hand-atomizer (Perkins), inhaling the spray for four or five minutes every three hours. In the case of adults, where the treatment was faithfully carried out, the results were uniformly successful, a cure being effected inside of nine days in every instance. With young children (two years and under) it was found impossible to use the spray, and even with older ones, where the treatment was intrusted to mothers or nurses, the cough was often modified rather than checked; but in every case, young or old, where the spray was properly applied a cure resulted.

"A few cases will illustrate the plan:

"Miss S——, aged nineteen, had coughed for six weeks, expectorated large quantities of mucus, and was waked up four or five times each night with paroxysms of coughing. After the first day's use of resorcine spray she slept through the night without waking, something she had not done before in weeks. The next day her cough was decidedly lessened, and after the third day it disappeared altogether. She continued the spray for a week longer, and had no return of the cough. In this case, as in all the others, no internal medication whatever was given.

"Mrs. A—— had been coughing three weeks. After one week's use of resorcine as above, the cough was completely checked and did not return.

"Miss O——, five years of age, began treatment as soon as it was certain she had whooping-cough—*i. e.*, in about two weeks after the cough began. Two applications daily for a week so far checked the cough that the mother did not think it necessary to bring her any longer to the office. A slight cough remained, however, which, upon the discontinuance of the spray, quickly grew worse and soon returned with its former violence.

"Another case illustrates this same tendency for a return of the cough unless it is first completely stopped.

"Mrs. M—— had coughed for over five weeks severely, with vomiting, profuse expectoration, and violent paroxysms. She noticed a marked improvement immediately after beginning treatment, and in four days was so nearly well that she thought it useless to do anything more. She stopped the spray, and the cough quickly returned, and on the seventh day, when she came to my office, the cough was nearly as bad as ever. The spray was ordered again to be persisted in, and I am expecting a report from her in a few days.

"Do not these cases render plausible the hypothesis that micrococci, by their presence along the upper air-tract, are the cause of whooping-cough, and that unless these are thoroughly destroyed by germicides those that remain rapidly multiply and bring on a train of symptoms as before?

"Certainly the treatment is a pleasant one, easily carried out when the patient is not too young, is inexpensive, and most efficient."

THE OPHTHALMOSCOPE IN THE HANDS OF THE GENERAL PRACTITIONER.

Neil. J. Hepburn, M.D., Instructor in Ophthalmoscopy at the New York Polyclinic, sends us the following communication: "A few remarks on the use of the ophthalmoscope by the physician in general practice may not be out of place here. But before proceeding to that branch of our subject it may be as well to call attention to a still simpler mode of examining the transparent parts of the eye, known as 'oblique illumination.' To apply this method, the patient is seated in a darkened room with a light to the temporal side and somewhat forward of the plane of the eye to be examined. A convex lens of two or three inches focus is then held at its focal distance from the observed eye in such a position as to intercept and concentrate the rays of light falling upon the cornea. The observer is to be on the nasal side of the observed eye, in a position to receive the rays reflected from the illuminated surface. By causing the patient to look up and down, to the right and left, the whole cornea may be inspected. The normal cornea, when examined in this way, shows a faint silvery haze. If it appear as clear as under ordinary illumination, as occurs in rare instances, it is said to be an indication of strumous taint. If there are opacities they will appear more opaque and of a more pronounced whitish or yellowish tinge. By bringing the light by degrees more and more directly in front, and the concentrating lens a little closer to the observed eye, the iris, lens, and anterior portion of the vitreous may be explored. A second convex lens may be used between the eye and the observer to magnify the image.

"After completing the inspection by the above method, if we wish to see further into the interior of the eye we have recourse to the ophthalmoscope. There are two methods generally employed in using the instrument: the direct, which gives a greatly magnified picture of a small part of the fundus oculi, and the indirect, with larger field and a low magnifying power. Hence the 'indirect method,' though somewhat more difficult for the beginner, is better adapted for a general survey, while the 'direct' is more useful for the study of details.

"In the indirect method we employ the same lens used in oblique illumination, the light being reflected into the eye from the mirror of the ophthalmoscope. The source

[1] Trenholm reported in 1884 "a case of decided mania; both ovaries were found to be diseased, and their removal was followed by complete recovery of the patient, both mental and physical" (Medical News, December 27, 1884).

of illumination should be on the temporal side, and behind the plane, of the eye to be examined, the observer sitting in front and a little to the same side, at a distance of sixteen to twenty inches. The observer uses his right eye if the patient's right eye is under observation, and his left eye if the left eye is to be looked at. Now the patient is directed to look directly forward to bring the optic-nerve entrance into line, and the light thrown directly into the pupil. Then interpose the convex lens, held in the other hand, directly in front of the observed eye, and at a distance from it of one or two inches. The optic disk and a considerable portion of the fundus can then be seen. If the view be not clear, it may be necessary to turn on a plus or minus glass behind the mirror till the greatest distinctness possible is obtained, or to move the convex lens to one side or the other to bring the disk into view. By having the patient look up and down, to the right and left, the greater part of the fundus can be examined, and the position of opacities in the media determined by their parallax. By keeping the disk in view, and moving the condensing lens directly away from the eye toward the observer, a very good idea of the optical condition of the eye may be obtained. If the disk increase in apparent size as the lens recedes from it, the eye is myopic. If the image diminish on recession of the lens, there is hypermetropia. Increase in only one diameter denotes simple myopic astigmatism, as diminution in only one diameter signifies simple hypermetropic astigmatism. If the image of the disk increase or diminish all round, but more in one direction, there is compound astigmatism. If one diameter increases while the cross diameter diminishes, there is mixed astigmatism. If the disk take on grotesque changes in shape, and the vessels appear irregularly broken, you have irregular astigmatism. If there is no change in size or shape, the eye is emmetropic. The more rapid the change, the higher is the degree of error. The condensing lens must at no time be moved farther than its focal distance from the eye under inspection.

"In the direct method, the positions are relatively the same except that the condensing lens is dispensed with and the observer approaches his eye as near the observed eye as he can while keeping it illuminated. The beginner should look through any lens in the ophthalmoscopic disk which will give him a clear view of the fundus oculi, without regard to the refraction. When he has become more apt at getting a good view, he may, after correcting any error of refraction which may exist in his own eye, find the *weakest minus* or the *strongest plus* glass, with which he gets the clearest picture. The edge of the optic disk or the small retinal vessels near the macula are good points to look at for this purpose. Steady practice of this sort will enable the observer in time to relax his accommodation entirely, so that he can accurately determine the refraction in the observed eye in every case.

"It is essential in beginning the study of ophthalmoscopy, that the patient's pupil be dilated as widely as possible by a mydriatic, and in examining by the 'direct' method, the effect of atropine is much to be preferred, as it not only dilates the pupil but suspends the accommodation."

VERY SIMPLE.—A classification of insanity is given by Dr. John P. Gray, which for simplicity quite equals the famous classification of skin diseases into "eczema and not eczema." It is as follows: *Mania*, manifested by delusions of excitement, expansive ideas, exaggerations, self-consequence, incoherence, etc. *Melancholia*, manifested by delusions of depressing character, painful ideas, and apprehensions. *Dementia*, representing conditions of mental failure and feebleness of mental action. All cases of insanity come under these three heads. Cases may be acute, subacute, chronic, periodic, paroxysmal, but they are either mania, melancholia, or dementia.

AMBULANCES alter cases.

Progress of Medical Science.

REMOVAL OF CALLUS BY THE GALVANIC CURRENT.—Dr. Meyer, of Berlin, records the following case (*Deutsche Med. Wochenschrift*): A boy, thirteen years old, had sustained a fracture of the upper arm. After a plaster-of-Paris bandage had been applied, the arm was in three weeks so far healed that the lower and upper arms stood at an angle of 80°, the wrist being tightly drawn up, and the fingers lying without power of motion on the hand. Attempts had been made in vain to produce extension. When he was brought to Dr. Meyer, the latter discovered on the inner side of the elbow-joint a callus that occupied a third of the lower arm and had included the flexors of the fingers, thus depriving them of active and passive motion. On the application of the induction-current to the upper arm there was considerable movement in the muscles supplied by the radial nerve. When the ulnar nerve was brought under the influence of the current a slight movement of the abductor pollicis was observable, while irritation of the median produced a tingling sensation down into the hand. The galvanic treatment was as follows: The arm was laid on a conductor of the size of an octavo sheet, and a small electrode was applied, partly to the median nerve and partly to the callus. Frequent voltaic alternatives were employed. After sixty applications the boy could stretch out his arm fairly straight, and the place of the fracture could now be plainly felt on the inner side of the upper arm. After ninety applications the callus was reduced one-third, the active movement of the elbow-joint was nearly restored, and that of the wrist considerably improved. After one hundred and eighteen applications the muscles generally were in so good a condition that there could be no reasonable doubt about the perfect restoration of the use of the hand. This, Dr. Meyer thinks, shows that of all means the galvanic current is the most intensely sorbefacient.

NITRATE OF POTASSA AND MERCURIAL INUNCTIONS IN ACUTE RHEUMATISM.—In *The Russkaia Meditsina*, Dr. Grinevitzky advocates the treatment of acute articular rheumatism by the internal use of nitrate of potash (two drachms daily, in solution with raspberry syrup), and by the inunction of a mercurial ointment. The author's formula is: ℞. Ol. hyoscyami, ʒj.; ung. hydrarg. cinerei, ʒij.; ext. aconiti, ʒj. M. To rub in the joints affected every morning and evening. Fever gradually abates; the pulse becomes less frequent; articular pain, swelling, and heat decrease. The patient recovers in one or two weeks, according to the severity of the disease and its duration before coming under treatment. When resorted to in the very beginning of the affection, the treatment prevents spreading of the latter to other joints, or, at any rate, mitigates any subsequent symptoms. The author's assertions are based on an experience of more than twenty years' duration. None of other old or new anti-rheumatic remedies can compete with nitrate of potassa, as the author says. Frictions alone only somewhat mitigate the symptoms, but do not cure the disease, while the salt alone acts well, though recovery then becomes more protracted than where the inunctions are employed simultaneously. In conclusion, Dr. Grinevitzky states that, for the sake of comparison, he tried to treat some cases of rheumatism by nitrate, carbonate, and subcarbonate of soda, and by carbonate and subcarbonate of potassa, but did not obtain from them any use whatever.

GONORRHŒAL RHEUMATISM.—Loeb is of opinion that gonorrhœa is only complicated by rheumatism in those cases in which the gonorrhœal process has attacked the hinder portions of the urethra; and in favor of this view he adduces the two facts, first, that the rheumatic symptoms never occur in the early stages of a gonorrhœa,

and, secondly, that in the great majority of cases the rheumatism is never seen at all during the first attack, but only after subsequent attacks, when the posterior parts of the urethra are almost certain to be involved. As to the disputed point, whether the rheumatism is to be considered as a disease *sui generis* or as merely an ordinary rheumatic inflammation of the joints predisposed by the gonorrhœal infection, he comes to the conclusion that *polyarthritis rheumatica* and gonorrhœal rheumatism are two perfectly distinct diseases, and he bases his conclusions on the following grounds: 1st. The difference in the relation of the fever to the local changes in the two diseases—in ordinary rheumatism the fever and the joint-affection generally running hand in hand, whereas in gonorrhœal rheumatism the fever is always slight and in most cases is almost, if not entirely, absent. 2d. The difference in duration of the two processes, the gonorrhœal rheumatism running a much longer course. 3d. Gonorrhœal rheumatism is much less erratic in its character than ordinary rheumatism. 4th. The frequent association of gonorrhœal rheumatism with inflammation in the eyes—this inflammation, according to him, occurring sometimes without contagion, and being simply another local expression of the gonorrhœal infection. 5th. The less frequent implication of the heart in gonorrhœal rheumatism. 6th. The greater tendency to inflammation of the sheaths of tendons and synovial sacs generally in gonorrhœal rheumatism. 7th, and lastly. The difference in behavior of the two processes toward the salicylates. Loeb thus considers gonorrhœal rheumatism as an infectious process, the seat of infection being the hinder parts of the urethra; and this view receives apparent support from the recent discovery of a specific organism in the gonorrhœal secretion, the gonococcus. Some doubt, however, still exists as to the specific character of this organism; and hence Loeb is more inclined to think that the cause of the infection will be found in non-specific organisms, examples of whose action in producing inflammation in joints we have, according to him, in the rheumatic affections of the joints which sometimes occur during the puerperium, also along with bronchiectasis, scarlet fever, and dysentery. As to the treatment, it is especially important as quickly as possible to cure the inflammation in the urethra, and especially of the hinder parts.—*Practitioner.*

Decortication of the Finger.—Under this title M. Thomas, of Tours, described a peculiar accident, the effects of which he was called upon to repair. A man who wore a plain ring on his finger was suspended by it from a railing, and the ring slipped off, carrying with it the entire skin of the finger from its root to the tip. The cutaneous envelope was immediately replaced under antiseptic precautions. The union was not complete, but all the integument covering the first phalanx and a part of the second was preserved.—*Journal de Médecine et de Chirurgie Pratiques*, June, 1886.

A Simple Method of Removing Wens.—In the *Northwestern Lancet*, July 15, 1886, Dr. Lauenstein's simple method of removing sebaceous cysts of the scalp is described. The skin over large wens of the scalp is often so thin that, in the commonly practised method of extirpation with a free incision over the convexity of the tumor, the sac is often ruptured in spite of all care, and through collapse of the walls of the sac the separation of the skin is rendered difficult and protracted in a disagreeable manner. This accident, unless it is a case of inflamed wen, may be avoided with certainty by a simple expedient, which has recommended itself to him on account of the rapidity of its execution, and which will be readily appreciated by those to whom it often happens to be pressed for time, or who, living in the country, are obliged to operate without skilled assistants. After shaving and cleaning the neighborhood of the wen, he makes a radial cut, about one inch long, through the skin where it is separated from the capsule of the wen, for instance, on the back of the head at the lowest point of the base of the tumor; through this slit he introduces the slender handle of the scalpel used, or a similar instrument, between the skin and sac, more or less deeply according to the size of the tumor. This is very easily accomplished, and he then makes several sweeping movements of the scalpel-handle to the right and left, thereby separating with ease the sac from the skin. The elasticity of the skin allows almost the whole circumference of the wen to be separated in this way in a few seconds. He then cuts, with one snip of the scissors, the skin over the crown of the tumor as far back as is necessary, and shells it out whole from its seat. There is often no bleeding, because of the division of the vessels of the sac by a blunt instrument. The rest of the treatment—sutures, drainage—is not affected by this procedure; nevertheless, he adds that any crushing or tearing of the edges of the wound is completely avoided.

A Rare Case of Aphasia.—Dr. Volland reports the following peculiar case: A strong, healthy boy, fifteen years of age, fell into the cellar of a house which was in the course of construction, receiving a wound over the right parietal bone. The periosteum was stripped from the bone for a considerable distance; but the bone was not broken, and there were no symptoms of fracture of the skull. After a period of unconsciousness lasting three days, the patient came to himself. There was no paralysis; but, while apparently understanding everything that was said, he was unable to speak. The only word which he used in all questions and answers was a stammering "anna," and the same word was the only thing legible that he could write; but it was found that he could count correctly and clearly, and could also add, subtract, multiply, and perform any numerical problems with ease. After about two weeks the patient began to learn a few words. He would first decipher a word here and there in reading, and soon was able to repeat the word after reading it. The wound, which was received in March, healed rapidly, and the following winter the boy went to school. Here he was able, only with the greatest difficulty, to speak or write a connected sentence, and was very backward in reading and writing, but in mathematics easily kept up with the brightest and most advanced of his schoolmates. Six years later there was still much difficulty in speaking, and he often forgot words when at all excited. Within the last year he has had occasional attacks of vertigo, so that he would have to take hold of some support to keep from falling. The general nutrition and bodily strength are excellent.—*Centralblatt für Klinische Medicin*, July 10, 1886.

The Diuretic Action of Watermelon.—Dr. Popoff has been experimenting with the inspissated fresh juice, or syrup, of this fruit, and has found that it possesses marked diuretic properties (*London Medical Record*, June 15, 1886). When animals received from fifty to one hundred grammes of the syrup (with food) in twenty-four hours, the daily quantity of urine was three or four times greater than under ordinary conditions; again, on intravenous injection of the syrup, the urine for several minutes flowed in a stream from a cannula tied into the ureter. In dogs, the internal administration of five hundred grammes at a time produces no effect, except powerful diuresis. Intravenous injection of one to two grammes of the syrup causes an immediate increase in the secretion of urine, the latter assuming a dark color, and containing sugar. This increase lasts for ten to sixty minutes, and is accompanied only by a slight fleeting decrease of the blood-pressure. On the injection of 0.25 to 0.5 gramme for each kilogramme, a considerable fall of the pressure and a great acceleration of the pulse rapidly follow. An intravenous injection of 3.0 grammes per kilogramme produces a further fall of the pressure and a fleeting increase, with a subsequent sudden enormous decrease in the frequency of the pulse, the animal dying from cardiac paralysis. As some special

experiments show, the quickening of the cardiac action is dependent upon the syrup acting on the peripheral ends of the vagi. In all cases, intravenous introduction of the syrup rapidly produced a strong sedative effect, "the animal remaining strikingly quiet, and giving no response to tactile or even pathic irritation." Another group of experiments showed that the diuretic action of melon-syrup was dependent mainly upon its direct influence on the renal tissue.

Treatment of Neurasthenia and Hysteria.—In a recent paper Dr. Burkart reports a number of cases of hysteria and neurasthenia, treated by Weir Mitchell's method of rest in bed, massage and faradization of the muscles, overfeeding, and isolation, and points out the circumstances under which this method may be expected to give good results. The first condition of success is that the patient shall have preserved a certain amount of will-power, and shall have a clear idea of what it is intended to accomplish by a strict carrying out of the method. As contra-indications he mentions an irritable condition of the brain as regards its psychical functions, marked hyperæsthesia of the abdominal sympathetic, and uncontrollable reflex vomiting. If, however, this form of vomiting be absent, the presence of dyspeptic symptoms indicates a proper subject for this method of treatment. The digestive powers are very quickly restored in hysterical patients, though neurasthenia gastrica requires more time for its correction. Cases of spinal irritation are also speedily relieved by Weir Mitchell's plan.—*St. Petersburger Medicinische Wochenschrift*, June 28, 1886.

The Etiology of Puerperal Cystitis.—In several cases of puerperal cystitis, Dr. Bumm reports that he found a diplococcus resembling closely the gonococcus, but distinguishable from it by staining and cultures. The cocci were disposed in little collections, often lying within or around a cell. This micro-organism is said by Doléris to be constant in the lochia, and it is supposed that it gains entrance into the bladder during catheterization. In experiments upon animals Bumm found that the injection of these microbes into the bladder was seldom followed by any inflammation unless the mucous membrane were injured. In the latter case a catarrh, with profuse purulent secretion, was excited. The marked suppuration attending puerperal cystitis was therefore supposed to be due to these diplococci from the lochial discharge. When no wound of the mucous membrane of the bladder was present, the micro organisms found no lodgment, and were washed away by the urine.—*Allgemeine Medicinische Central-Zeitung*, July 17, 1886.

Another Method of Artificial Respiration.—Mr. J. A. Francis describes the following method of artificial respiration in the *British Medical Journal*. The body of the patient is laid on the back, with clothes loosened, and the mouth and nose wiped; two bystanders pass their right hands under the body at the level of the waist, and grasp each other's hands, then raise the body until the tips of the fingers and the toes of the subject alone touch the ground; count fifteen rapidly; then lower the body flat to the ground, and press the elbows to the side hard; count fifteen again; then raise the body again for the same length of time; and so on, alternately raising and lowering. The head, arms, and legs are to be allowed to dangle down quite freely when the body is raised. The author alleges that this method is most successful, and it is so simple that anyone can perform it without any teaching.—*London Medical Record*, June 15, 1886.

Syphilis Aborted by Sulphur Baths and Mercurial Inunctions.—Dr. P. J. Kalashnikoff records the case of a soldier who was admitted with a characteristic induration on the penis at the site of a recently healed primary ulcer, and with a marked universal adenitis. After ten sulphur baths, the sclerosis became exulcerated. The ulcer did not yield to local medication. Under the influence of the inunction of gray mercurial ointment (ten frictions of one scruple each, and ten of half a drachm), and sulphur baths (fifty-one), the ulcer rapidly healed, and sclerosis and adenitis disappeared. His skin and mucous membranes remained healthy. Not a single syphilitic symptom made its appearance subsequently (more than six months passed from his cure up to the date).—*London Medical Record*, June 15, 1886.

Radical Cure of Hydrocele by Carbolic Acid.—Dr. G. Buckston Browne reports in the *British Medical Journal* of June 26, 1886, a case of hydrocele cured by injection of carbolic acid after iodine had failed. He writes that a gentleman, twenty-three years of age, consulted him in the early part of April about a hydrocele, which had followed an attack of orchitis fourteen months before. He was going abroad, and urgently desired a radical cure. On April 13th, Dr. Browne tapped the hydrocele and drew off six ounces, and injected two drachms of tincture of iodine. Next day there was pain in the groin and loin, and the scrotum was tender and full. In four days so much fluid had re-collected in the tunica vaginalis that he tapped again, and drew off two ounces. In three days the same amount of fluid had again collected, and he then determined to give carbolic acid a trial, being encouraged to do so by the paper of Dr. Keyes in The Medical Record of February 20, 1886. On April 20th he tapped, and drew off two ounces, and then injected, with an ordinary hydrocele-syringe, sixty minims of pure carbolic acid, dilequesce l with five per cent. of glycerine. The patient was ignorant of what had been injected, but at once said he tasted carbolic acid. Next day the part was swollen, but not very tender. No fluid was ever again detected in the tunica vaginalis; and he left London in a week, and has remained well ever since. The cure was rapid, complete, and nearly painless.

Lactic Acid as a Caustic.—It will be remembered that Mosetig has recommended lactic acid as especially valuable for use as a caustic from the fact that it spared the healthy tissues. This claim would seem, however, to be disproven by Drs. Spitzer and Hermannn in some recent experiments. These observers publish eight cases of lupus and epithelioma treated with concentrated lactic acid as proposed bv Mosetig, and state their conclusion as follows: 1, The pain produced by the cauterization with lactic acid is at least as great as that caused by any other caustic; 2, the patients prefer invariably any caustic to lactic acid; 3, the action of lactic acid resembles that of other caustics, but is less energetic; 4, healthy tissues are not spared any more by this than by any other caustic; 5, lactic acid has to be employed for a much longer time than chloride of zinc and other energetic caustics.

Chlorotic Fever.—Mollière was the first to call attention to the fact that a mild febrile condition is frequently present in chlorosis, and one of his pupils, Leclerc, has extended his observations and confirmed the statements of his teacher. In thirty cases of true chlorosis, in which the temperature was taken with the greatest care, the author noted oscillations ranging from 99.7° to 101.5° F. The fever assumed one of two forms, either a continued febricula without noticeable oscillations, or a febricula with exacerbations. But in the cases observed the slightest accident might occasion a very decided rise of temperature, the susceptibility of chlorotics resembling in this respect that of children. The duration of the fever varied within wide limits, and in general corresponded to the slowness with which the chlorosis disappeared. The frequency of chlorotic fever is a matter not yet determined, but the elevated temperature is not an invariable accompaniment of the chlorosis. No satisfactory explanation of this occurrence has yet been given, and the experimental researches of the author have as yet been without result.—*Rivista Clinica e Terapeutica*, June, 1886.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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RECENT CONTRIBUTIONS TO THE SUBJECT OF ANEURISMS OF THE HEART AND AORTA.

THE records show that about one death in every eight hundred, in this city, is due to aneurism. The very great majority of these deaths occur from aneurisms of the aorta. Although Crisp's statistics make popliteal aneurism second in frequency to that of the thoracic aorta, yet modern surgery has made death from this source comparatively infrequent. As not a few persons die with small or unrecognized aneurisms, it is safe to say that aneurismal disease is of tolerably frequent occurrence.

Of the numerous reports and papers upon aneurism that have been contributed of late, a majority are purely clinical. We leave it to our readers to judge of the interest and importance of such kind of work. The symptomatology of aneurism has been very thoroughly worked up, yet it is very true that the field is not entirely closed.

In the line of clinical study, Dr. Hobart A. Hare (MEDICAL RECORD, May 15, 1886) has reported a case of thoracic aneurism occurring in a girl only seventeen years old, and although the tumor bulged well up into the suprasternal notch, there was no dysphagia, dyspnœa, loss of voice, or dropsy. There was double aortic disease and enormous cardiac hypertrophy. In another case the patient was only twenty-eight. Here there was aneurism of the arch, with pressure on the trachea. The interesting point was that the pain, and even delirium, from which the patient suffered was relieved by hyoscyamine and increased by morphine.

A very rare case of aneurism of the hepatic artery (the eleventh on record) was shown to the London Clinical Society recently by Dr. R. Caton. The diagnosis was not made before death.

Equally rare are cases of aneurism of the splenic artery, of which Dr. F. Ch. Turner has shown a specimen ("Trans. of Lond. Path. Soc.," vol. 56). The disease occurred in a laboring-man, aged thirty-seven, who died suddenly from rupture of the sac.

Mr. Percy Kidd has shown to the London Pathological Society four specimens illustrating chronic cardiac aneurisms. In all cases the sac involved more or less of the interventricular septum, and, as is usually the case, was connected with the left ventricle. The cause of such aneurism is generally believed to be a chronic myocarditis, but these cases showed that one factor was the abnormal friction of endocardial surfaces upon each other.

Cardiac aneurisms are most frequently found at the apex of the left ventricle, and Dr. S. J. Sharkey has shown a specimen illustrating this ("Trans. of Path. Soc. of Lond.," vol. 56).

Acute aneurisms of the aortic and other valves are not infrequently caused by ulcerative endocarditis. Mr. Norman Moore reports a case illustrating this ("Trans. of Path. Soc. of Lond.," vol. 36).

An interesting illustration of a rare clinical variety of aneurism was exhibited by Dr. F. Ch. Turner to the London Pathological Society. The patient, a syphilitic man, died with symptoms of thoracic aneurism, a most notable feature being an œdema and lividity of the face and upper extremities. On post-mortem examination an aneurism of the ascending aorta, three inches and a half long, was found, communicating freely with the superior vena cava. Dr. Turner reported another curious case in which a thoracic aneurism had ulcerated through and finally burst into the œsophagus. At the autopsy the stomach was found full of blood. In still another case there was a dissecting aneurism of the arch of the aorta, which had perforated the pericardium. The patient died suddenly and it was found that the blood was diffused throughout the mediastinum and had also filled the pericardial sac.

Dr. F. de Haviland Hall (*Brit. Med. Journal*, December 19, 1885) reports a case of aneurism of the ascending and transverse portion of the arch of the aorta which is interesting, because no symptoms of aneurism were noted except those of pressure on the trachea and recurrent nerve. A malignant tumor was, therefore, diagnosticated. The symptoms were dyspnœa, cough, purulent expectoration, and paresis of the posterior crico-arytenoid muscles. On post-mortem examination an aneurism of the size of an orange was found, involving the posterior wall of the ascending arch and pressing on the left vagus and left recurrent.

Mr. T. G. Styan (*St. Bartholomew's Hosp. Reports*, xxi.) reports three cases of aortic aneurism, all of which had this peculiarity, that they ruptured into the left pleural cavity. In one of the cases the symptoms were those of biliary or intestinal colic and the presence of an aneurism was not made out during life.

Mr. Henry Morris ("Medico-Chirurg. Trans.," vol. lxviii.) reports a case of aneurism of the abdominal aorta, which caused gangrene of the right lower extremity, partly by embolism and partly by pressure on the inferior vena cava. The thigh was operated upon on account of the gangrene, but the patient died eight days later.

Dr. George B. Shattuck (*Boston Medical and Surgical Journal*, April 9, 1886) describes the case of a man, fifty-one years of age, who was brought to the hospital suffering from a pulsating tumor in the left lumbar region. He experienced intense pains; the tumor increased in size until it was as large as a water-melon. Death occurred, and at the autopsy an enormous false aneurism was found in the left flank, communicating with a true aneurism of the abdominal aorta.

In the line of diagnosis and prognosis Dr. A. A. Smith contributes two cases (MEDICAL RECORD, February 13,

1886), and shows that abdominal aneurisms may become protected by inflammatory connective-tissue deposits, the result of local peritonitis. In this way the tumor-wall may receive support, rupture be prevented, and life prolonged. The thickened matted mass, however, sometimes obscures the diagnosis.

As for treatment, a ligation of the innominate artery, successful for a time at least, for subclavian aneurism has recently been performed by Mr. Bennett May, of London.

Dr. Berényi (*Deut. Med. Zeitung*, 1886, No. 54) records the results of his successful treatment of a case, diagnosticated as aneurism of the aorta, by iodide of potassium. The drug was given in ordinary doses for two months.

Dr. Black (*The Lancet*) adds another to the long list of cases in which aneurism of the thoracic aorta was treated unsuccessfully by galvano-puncture. Two isolated needles were introduced, and a current of nineteen cells, increased to thirty, was passed for an hour. Ten days later the operation was repeated, the current being passed for half an hour. Nine days after this the operation was repeated for a third time. After this the patient died, and at the autopsy no coagulum was found to have been formed in the sac.

The introduction into the sac of a hollow ivory needle through which a coil of wire is passed, and this connected with a galvanic battery, has been recently alluded to in this journal.

The treatment of abdominal aneurism by compression, as advocated by Mr. Holmes, receives poor encouragement from a case reported by J. R. Lunn and F. L. Benham ("Med. Chirur. Trans.," vol. lxviii). The patient, a man thirty-two years old, had a pulsating tumor in the abdomen five to six inches long, and six to seven inches wide. It was movable, and pressure on the aorta lessened the pulsation. A tourniquet was applied for four and three-quarter hours; the tumor pulsated less and became smaller and harder, but the patient died in three days. On post-mortem examination, it was found that a part of the jejunum had been compressed and was gangrenous.

In *The Lancet*, July 10, 1886, Mr. J. A. Kelly reports a case of simultaneous ligature of the right subclavian and right common carotid for aneurism of the ascending arch. The operation was successful and the symptoms were improved. A point of interest was that a good deal of the operation was done under cocaine.

DOES GOOD PLUMBING GUARANTEE A SANITARY DWELLING?

Dr. E. Noeggerath describes, in the *Journal of Obstetrics*, a microbe of extraordinary vitality which he obtained from uterine clots in a case of puerperal fever. The microbe was cultivated and its peculiar mode of growth noted. It was considered to be the cause of the fever:

"1. Because blood-clots expelled during the course of puerperal fever do contain, if any, the identical microbe which is found in abscesses developed in other parts of the body, *i.e.*, the specific cause of the fever in each individual case.

"2. Because this microbe belonged to the class of bacteria called saprogenes, with which corresponds the type of fever that I have attempted to describe.

"3. Because the patient was under its influence before and during confinement."

The fever in question, which was not fatal, was remittent, low, and prolonged. It was considered to be symptomatic of sapræmia, *i.e.*, of absorption of decomposed lymph and gases, not of a micro-organism itself, as in septicæmia and pyæmia. The labor was conducted upon the most careful antiseptic principles, the room, furniture, and clothing being thoroughly disinfected, and sublimate injections being made at intervals during parturition. Yet, despite it all, the microbe appeared and set up the putrefactive change which caused the fever. This microbe was found, among others, on the stopper of one of the wash-basins. Yet as regards the plumbing of the house Dr. Noeggerath says:

"Before and after the fever the present owner of the house had one of our best experts to examine the plumbing work, and he received the satisfactory assertion that it was the best that could be had in our day; and still the house was poisoned from the water-pipes.

"Consequently, a so-called good plumbing, from an engineering point of view, is no guarantee of a sanitary condition of a dwelling."

THE MICROBE OF RABIES.

The announcement of the discovery of the microbe of rabies, by Mr. G. F. Dowdeswell, of London, is made in terms which appear to us to be far from satisfactory.

In the first place, we can only express our astonishment that Mr. Dowdeswell has found so little difficulty in obtaining material for experiment—his language indicates that a large number of dogs with rabies was at his disposal. Now we know that one scientist in Berlin has been waiting in vain for a single case of undoubted hydrophobia for over three years, and that Dr. Billings, of this country, has not succeeded in obtaining, since his return from his visit to Pasteur, in Paris, a single specimen of a really hydrophobic dog, dead or alive, although reported cases of rabies have been of frequent occurrence. If we, therefore, express a doubt as to the genuineness of the material readily found in abundance by some experimentalists, the skepticism is pardonable.

Again, Fol made the same announcement with equal confidence in 1885. Now the microbe of rabies of Fol and that of Dowdeswell are not only not identical but opposite in character. Clearly one must be in error; which, if either, is in the right?

Dowdeswell takes much pains to state that his microbe will not take the stain of certain dyes, but omits for the present to state what stain it will take. Why make a mystery of it?

Dowdeswell cannot find his microbe in the salivating glands. Now we know that the microbe, if it exists at all, is certainly in the saliva of the dog, as that is the immediate medium of contagion to man. This fact casts a serious doubt upon the value of the Dowdeswell discovery.

Dowdeswell's microbe of rabies is said to be a micrococcus, not very minute, and of the usual form. They are spherical bacteria, and are usually found in cases of a contagious nature and virulent affections.

A NEW SKIN DISEASE.

FOR several years Western medical journals have contained articles upon a distressing form of skin disease known by the various names of "The Scratches," "Mange," "Prairie Itch," "Michigan Itch," etc. In a recent issue of the *Medical Age*, Dr. J. E. Clark gives a tolerably systematic account of it.

The disease, in most cases, is ushered in without any prodromata, the first symptoms being itching and a papular eruption. The papules are at first very minute. If not aborted they become vesicular in places, "the acuminated elevation of the cuticle giving way to the orbicular, which, with an accumulation of lymph, clear and colorless, marks the vesicular stage. In this stage the severe itching is attended with considerable superficial heat and tingling of the part. In some cases the local inflammation runs high, and the surrounding derma is of a bright scarlet color, with a feeling of tension in the part affected."

The eruption always occurs on a portion of the body covered with clothing, the hands and face never being affected. It favors the arms, chest, abdomen, and thighs, and is never general. Small sores sometimes result from scratching; they become covered, however, with a scab, which desquamates, and all trouble in that immediate part is removed.

Some physicians regard the disease clinically as eczema papulosum. Dr. J. E. Engstad, of Grand Forks, Dak., describes a vegetable parasite which he believes to be the cause of the disease. "This organism," he says, "is found in all the layers of the epidermis, but its chief seat is in the corium. The organisms belong to the class of cryptogamia. The fungi appear like flattened, short, or elongated cells, with a very slender and tapering projection from each end, binding from five to twenty together in a chain, or as an oval cell, with from four to twenty hooklets projecting from its sides. A good and powerful microscope (600–800) will bring them into view. Their diameter is from twenty to thirty micromillimetres, and the hooklets and tapering appendage measure from ten to thirty micromillimetres."

According to the above accounts the disease is a vegetable parasitic affection. It is slightly contagious, and may run a long course, lasting even years, and causing the greatest distress.

The remedies suggested are very numerous. Internal treatment does little or no good, according to most writers, though arsenic and mercury are recommended externally, or ointments of mercury and sulphur, naphthol soap, followed by inunction of sulphur ointment with petroleum, lotions of carbolic acid and hyposulphate of soda, and frequent baths are recommended. The thorough and persistent application to the skin of parasiticides seems to be the basis of all the successful methods of treatment suggested.

THE CHOLERA.

THE epidemic of cholera in Italy this year has attracted little attention and appears to have excited no alarm. This is doubtless because of the general belief that the disease has spent its force. Parisian papers of this month express the view that the cholera, although still extending slowly in towns of Northeastern Italy, is showing signs of decline. It has disappeared from Naples, no cases are reported in Venice, and the disease does not seem to be attacking any place with a great degree of virulence In the week ending July 21st, the total number of cases reported was 717, with 328 deaths. In the subsequent week the figures were reduced to 199 cases and 83 deaths.

The cholera has reached Austria, but has so far only attacked a few places, viz., Fiume and Trieste, on the Adriatic coast. The number of cases reported is only one or two daily.

FURTHER INVESTIGATIONS REGARDING SCARLET FEVER AND COW'S MILK.

SOME new contributions have been made to this subject by Dr. E. Klein. It will be remembered that a few months ago an epidemic of scarlet fever was traced to a dairy, the cows of which were suffering from a disease (vesication and ulceration) of the udder and teats. Dr. Klein inoculated calves with virus from these cows, and thus showed that the disorder was a transmissible one. He also found in the tissues and secretions a micrococcus, which he cultivated, the organism resembling in its growth a streptococcus. Inoculation of pure cultures causes death in some animals, with marked lesions of the peritoneum and kidneys, the latter organs looking like the kidneys in scarlatinal nephritis.

It is very evident that our English brethren have got hold of a very important subject for investigation, but it appears to us that Dr. Klein, with his streptococcus, is very much afloat. Certainly this cannot be the parasite of scarlatina, as the investigations of Fraenkel and Fraudenberg show.

ACUTE CARDIAC DILATATION.

MUCH has been written of late upon the subject of acute dilatation of the heart occurring in the course of febrile diseases. That such dilatation does very often occur, and that it may give rise to marked and even fatal symptoms, is admitted. Systematic writers upon cardiac diseases, however, have not yet called sufficient attention to this matter. In Brainwell's classical work, and in Dr. Osler's excellent article upon cardiac diseases in Pepper's "System of Medicine," the point is hardly alluded to. Eichhorst says more about it, and gives some interesting illustrations.

An English physician, Dr. G. Coates, has recently contributed to the subject in an article on "Temporary Dilatation of the Heart occurring during the Course of Acute Disease" (*The Practitioner*, July, 1886). Dr. Coates reports four cases of acute dilatation, occurring during the course of a fever following mumps, in pneumonia, and in rheumatic fever. In all cases the physical signs were very decidedly marked, but in only one case were there notable symptoms of cardiac weakness. Dr. Coates concludes that acute temporary dilatation does occur, that it may not give rise to any symptoms, and that it is due to simple stretching of the under-nourished muscle. Murmurs are sometimes, but not always, heard, and the second sound in two cases was reduplicated.

DR. OLIVER WENDELL HOLMES sails from Liverpool on August 24th.

News of the Week.

LAPAROTOMY FOR GUNSHOT WOUND OF INTESTINES.—Dr. W. T. Bull, of this city, has again successfully performed laparotomy for gunshot wound of the abdomen. A sailor, aged twenty-five, was shot in the abdomen, August 12th, at 7.40 P.M., the ball entering two inches below and to the left of the umbilicus. He was taken to the Chambers Street Hospital in a cab. Two hours later the abdomen was opened, the wound having been first explored and found to be penetrating. There were no symptoms of any inter-abdominal injury, the pulse being 94, respiration 24, and temperature 98°. Much blood was found in the cavity, the small intestine was pierced in two places, the sigmoid flexure in one, and there was a wound of the sigmoid mesocolon, from which copious venous hemorrhage took place. The operation lasted one hour and a half, and was well borne by the patient. There have been no bad symptoms since; no vomiting, but slight pain and a moderate tympanites. The pulse has ranged between 90 and 110, temperature between 99° and 100°. This morning (the fifth day) there was a natural movement of the bowels. In short, the *only* untoward occurrence is the appearance to-day, August 17th, of a small mural abscess.

THE LATE DR. FRANK H. HAMILTON.—At a meeting of members and officers of the Society of Medical Jurisprudence and State Medicine, held August 13, 1886, Judge Hull presiding, it was

Resolved, That in the death of Dr. Frank Hastings Hamilton, its President, the Society has lost one of its truest friends, wisest counsellors, and most distinguished members; that we tender to his bereaved family and surviving friends assurances of our profound grief and sincere condolence in their great affliction; that his loss falls with especial severity upon this Society, over which he has so ably and impartially presided, to which he has contributed so much that is valuable, and from whom it had hoped to receive so much in the future; a man whose life has been characterized by all the social and domestic refinements; whose public and professional career has now the highest applause not only wherever the English language is spoken, but in foreign lands as well; whose devotion to surgical science and the relief of human suffering has wrought for himself tablets of imperishable fame, achieving for him the distinction of being one of the most eminent surgeons of his age, and at the same time conferring lasting honor upon his country. G. W. WELLS, M.D., *Secretary*.

After the adoption of these resolutions it was unanimously resolved to hold a memorial meeting in honor of Dr. Hamilton, at the hall of the Academy of Medicine, 12 West Thirty-first Street, on September 9, 1886, at 8 P.M.

AMERICAN SOCIAL SCIENCE ASSOCIATION.—The General Meeting of this Association for 1886 will be held at Saratoga, N. Y., from September 6th to 10th, inclusive, opening at 8 P.M., September 6th, with an address by the President, Carroll D. Wright, of Boston. The Department of Education will meet on Tuesday, September 7th; the Health Department on Wednesday, September 8th; the Department of Jurisprudence on Thursday, September 9th; and the Social Economy Department on Friday, September 10th. Papers on scientific subjects will be read by Drs. Grace Peckham, Holbrook Curtis, Valentine Mott, Wallace Wood, T. Munson Coan, all of New York.

POSSIBLY SUICIDE.—English journals say that there is, unfortunately, evidence to the effect that, in a moment of depression, Dr. Moxon administered poison to himself, a note to this effect, clearly written just before the fatal act, having been found among the papers on his table, the reason assigned for it being the insufferable torture experienced by him from an organic disease with which he was afflicted.

DR. PASTEUR.—Pasteur is a doctor at last, having been given a degree *honoris causa*.

THE SANITARY ERA is the title of a new weekly journal devoted to the subject of sanitation. It is edited by William C. Conant and published in this city.

DR. R. P. HOWARD having resigned the position of Vice-President of the International Medical Congress, to be held in Washington next year, Dr. J. A. Grant, of Ottawa, has been appointed to the same office by the Executive Committee.

BILLROTH'S OPERATIONS ON THE STOMACH.—In the last five years Billroth has performed operations on the stomach in 32 cases, with 19 fatal results. Out of 15 gastrectomies for cancer, there were 7 recoveries.

THE KENTUCKY SCHOOL OF MEDICINE had the misfortune to lose by fire, on June 10th, its entire premises and outfit. It has already secured a new and commodious building, however, and the work of turning out the much-needed new doctor will go on. It takes more than an ordinary conflagration to interfere with a real live American medical college.

THE IOWA STATE MEDICAL SOCIETY.—According to the *Iowa State Medical Reporter* the last meeting of this Society was a success socially, but hardly so in other respects. We are told that the scientific work was far below the capacity of its members, and that there appeared some evidences of lack of harmony among then. Iowa is a large State, with over three thousand physicians, and it ought to support a good society.

THE LATE DR. WALTER MOXON.—In a most appreciative sketch of the character of Dr. Moxon, Dr. Samuel Wilkes says: "It is impossible in a few lines to portray the character of so remarkable a man as the late Dr. Moxon. His was no ordinary mind, and I feel sure there is not anyone unfamiliar with his conversation and writings who could form any conception of its wonderful acuteness and depth. When I say his was no ordinary mind, I intend rather to convey the idea that Moxon could in no way be summarized as an eminent doctor or distinguished scientist. He was thus totally different from his late colleague, Fagge. The latter had a most orderly mind, of great acuteness, and threw aside everything he could not clearly bring to reasonable proof. Of such composition are most of our best scientific men—men whose methods of procedure are clear to all; and, if one

judge by results, in the complete overthrowing of old modes of thought, must be regarded as possessing the best minds of the age. Moxon was not one of these; and, in one sense, might be called superior, for he belonged to a class of persons whose mental processes are beyond analysis; he was essentially a genius; he could elaborate doctrines out of a brain which was always dealing with the most subtle problems. Just as the poet is born and not made, so it is with every genius. Moxon was thoroughly outside all that was commonplace, and, touched as he was with a spark of the celestial fire, he could pour out his thoughts with a brilliancy which often amazed his hearers. Even over his patients he discoursed in a manner entirely his own, and it is to be hoped that there are many of his old pupils who have preserved some of his highly acute and philosophic sayings. His intellect was of that high order that whatever he touched he needs must have advanced, and therefore all his contributions to medicine were of the most valuable kind. It is possible that he might have excelled still more at the Bar, or in literature become another Carlyle."

Is Pasteur also to Collapse?—The announcement is made of two more deaths of patients who had been bitten by mad dogs and then inoculated by Pasteur. Among fifty-four persons bitten by mad wolves and inoculated by Pasteur, fourteen have now died, which is about the ordinary percentage. It seems impossible not to conclude that the Pasteur virus is at least impotent against mad wolves.

Postmaster or Doctor.—An Alabama physician has retired from practice temporarily in order to become postmaster.

Regulating Medical Practice in Iowa.—The State Board of Examiners, says the *Iowa State Medical Reporter*, held their first session under the new law on July 9th. Ten per cent. of the physicians of the State presented diplomas or certificates of practice. Six presented themselves for examination. There is a good prospect of a satisfactory enforcement of the law.

American Dermatological Association. — The tenth annual meeting of this Association will be held at the Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

The Association of American Physicians.—The extraordinary course of the *Journal of the American Medical Association* in attacking The Association of American Physicians and Pathologists has, we hope, received a check through the following letter, sent to the *Journal* by Dr. James Tyson, Secretary of the Washington meeting. He writes: "Referring to the communications in your issues of the 24th and 3d ult., with regard to 'The Association of American Physicians,' it was with extreme reluctance, and only after recalling the fact that published matter of this kind becomes the source of history—history which in this instance would be erroneous—that I decided to write briefly the actual history of the formation of the society. *First*, the organization was altogether independent of, and prior to, the idea of a Congress of American Physicians and Surgeons. The orginal suggestion came more than three years ago, *not* from Philadelphia or New York or Boston, but from Toronto, Canada. It was based upon the feeling that such a society had become almost necessary in view of the fact that all departments of medicine, except general medicine and pathology, were represented in special societies devoted to their interests. Further, it was long after the arrangements for organization were essentially completed that the idea of a Congress of American Physicians and Surgeons was formulated by the American Surgical Association. *Second*, the Association was not formed in antagonism to the American Medical Association, and it was a matter of serious solicitude with some of the founders lest such interpretation should be put upon its formation; but this was not considered sufficient reason for giving up a plan which promised so much for medicine and pathology. So far as I know, no member who is also a member of the American Medical Association has 'forsworn his allegiance' to the latter, as is alleged by your Philadelphia correspondent. *Third*, in selecting original members for the 'active list,' it was desired to secure men who had been and still are active in furthering the interests of medicine and pathology, either as practitioners, teachers, or writers. That this was accomplished with reasonable success, when it is remembered that a certain number of vacancies are maintained for the present, will, I think, be conceded by the unprejudiced observer. *Finally*, with regard to the name chosen, a moment's consideration should satisfy the critic that the use of any other 'article' than the 'definite' would produce a ludicrous and impossible title. Such a title would be '*An* Association of American Physicians,' '*An* American Gynecological Society,' '*An* American Ophthalmological Society,' etc."

A Fortunate University.—Since 1879 the University of Sydney has received donations exceeding a million of dollars. One bequest, known as the Challis bequest, is expected to realize £200,000. The Macleay Natural History collection, another recent gift, is valued at £25,000, and a sum of £6,000 has been promised for the endowment of a curatorship in connection with it. For the purpose of founding a library a donation of £30,000 was made.

Separate Licensing Boards in Canada.—The *Canada Medical and Surgical Journal* says: "The advisability of establishing a Central Examining Board has now been fully entertained both by the Governors of the College and also by the general meeting of the profession. It will, therefore, doubtless come into force as soon as the necessary legislation shall have been obtained. The proposed composition is such that all interests seem to be fairly represented. The total number will be twenty, more than would be required, except for the absolute necessity for a double set of examiners, English and French."

A Case of Graves' Disease, due to nasal hypertrophy, is reported by Professor Hack, of Freiburg. On destroying the diseased erectile tissue of the nose with a cautery, the eye and heart symptoms and stricture disappeared. Professor Hack thinks that Graves' disease may be a reflex neurosis.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

(DIRECT CABLE TO THE MEDICAL RECORD.)

(Continued from page 188.)

THURSDAY, AUGUST 12TH—THIRD DAY.

THE Association was called to order at 11 A.M. by the President, WITHERS MOORE, M.D., F.R.C.P., of Brighton, Surgeon to the Sussex County Hospital.

The first order of scientific business was the delivery of the

ADDRESS ON SURGERY,

by FREDERICK ABELL HUMPHRY, F.R.C.S., of Brighton, Surgeon to the Sussex County Hospital, who first referred to the mutual relation existing between medicine and surgery, shown in the fact that the one could not be practised successfully to the exclusion of the other; that the invasion of the field of surgery from a medical point of view is a necessity; that the invasion by the surgeon of fields heretofore regarded as exclusively medical has carried with it broader views with reference to the condition of the whole body. At one time the cranial cavity was looked upon as belonging wholly to the physician, and whenever its contents became involved in disease, save what was the result of direct violence, the physician was consulted. So it was with the thorax and abdomen. Only a few years have elapsed since it was regarded as chimerical to propose to explore the abdominal cavity by means now so freely practised by surgeons. The consequence was that physicians had so thoroughly familiarized themselves with the diseases of the contents of these three great cavities of the body that now it is doubtful if medicine has not done as much for surgery as surgery has done for medicine. That this mutual relation has been recognized has been shown by the fact that careful surgeons, in all cases surrounded by the least doubt, call to their aid the diagnostic ability of the skilled physician before applying the resources of their art.

The speaker then compared old with modern surgery, and here he was led to mention and to describe more or less in detail the advancements which had been made, not only in science, but in the application of its principles, aided by the marvellous discoveries of anæsthetics and the use of antiseptics.

As an illustration of an opportunity for further advancement, notwithstanding the great achievements already made, special reference was made to our present knowledge of visceral syphilis. Attention was then directed to the medical treatment of surgical cases. In many cases surgical operations failed to cure the patient because they were performed only as an aid to the physician, and the patients died because the surgeon failed to give them the medical treatment required to cure the disease that gave rise to the necessity for the operations.

In this respect provincial surgeons enjoyed advantages not vouchsafed to their apparently more highly favored brethren of the great metropolis; for, being general practitioners also, they were able to extend to their patients all the benefits which experience as physicians in private practice enabled them to impart.

The address was concluded by special reference to the advantages afforded by Brighton to scrofulous patients, and the benefit which surgical cases could obtain by reason of better nursing and the facilities for attending to the general system, hygienic and otherwise, than could heretofore be offered.

The address was listened to with marked attention throughout the entire delivery, and at its close Sir William MacCormac proposed a vote of thanks to Mr. Humphry, which was seconded by Mr. Wheelhouse, and heartily adopted by the Association.

AWARD OF PRIZES.

The gold medal for distinguished merit was presented to Dr. Edward Waters. This is the highest honor which the Association can bestow, and was awarded to Dr. Waters in recognition of his long, arduous, and at last successful labors in securing medical reforms.

The *Stewart* prize was awarded to Dr. Robert Cory, who had demonstrated on his own person the possibility of vaccinal syphilis.

The *Middlemore* prize was divided between Mr. Berry and Mr. Frost.

PRESENTATION OF AMERICAN DELEGATES.

NATHAN S. DAVIS, M.D., LL.D., of Chicago, President of the International Medical Congress, was presented to the Association, and spoke at some length with reference to Congressional matters. Sterling and most fitting were the words he used in memory of Gross and Flint, which drew from the sympathetic audience a hearty applause. He extended a cordial invitation to the members of the British medical profession to attend the forthcoming Congress.

DR. WILLIAM BRODIE, of Detroit, was introduced, and responded in a few well-timed remarks, which were received with cheers. Other delegates were introduced and spoke, and on motion by the President, seconded by Balthazar Foster, President of the Council, Dr. Davis and his colleagues received a vote of thanks for their unanimous expression of fraternal feeling toward the profession of the United Kingdom.

The Association then adjourned to meet on Friday, August 13th.

At 7 P.M. the General Association attended a public dinner—a sumptuous repast—followed by speech-making.

MEETINGS OF SECTIONS.

SECTION IN MEDICINE.

The Section met in the Music Room, and was called to order at 2 P.M. by the President, DR. H. BROADBENT, who delivered a short address, which was followed by the regular subject for discussion, entitled

ON THE EFFECTS PRODUCED BY GALL-STONES, WITH PARTICULAR REFERENCE TO SOME RARER POINTS IN THEIR SYMPTOMATOLOGY.

W. Ord, M.D., F.R.C.P., of London, opened the discussion, which was continued by Dr. T. Churton, Professor Charcot, of Paris, France, and Dr. Sir Peter Eade.

The discussion pertained largely to some of those rare disturbances which are manifested by the nervous system.

GEORGE H. SAVAGE, M.D., then read a paper on

MENTAL SYMPTOMS WITH LOCOMOTOR ATAXY,

in which he referred to those peculiar mental aberrations sometimes seen in connection with chronic diseases affecting the nervous system, and which have been regarded as being close to the border-line of insanity.

C. H. RALFE, M.D., followed with a paper on

FUNCTIONAL ALBUMINURIA,

in which the arguments *pro* and *con* were lucidly set forth, leaving the hearer to conclude that the greatest safety for the patient consisted in giving him the full benefit of the doubt before deciding that his case does not present a serious aspect. That there were cases in which albuminuria was temporary had been fully demonstrated.

This paper was followed by one on

THE RELATIONSHIP OF UREA TO CERTAIN DISEASED PROCESSES,

by T. OLIVER, M.D., chiefly those affecting the digestive organs and the nervous system.

The Section then adjourned to meet on Friday.

SECTION IN SURGERY.

The Section was called to order by the President, JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., of London, and the first paper was on

HEPATIC PHLEBOTOMY AND PUNCTURE IN HYPERTROPHIC CONGESTIONS OF THE LIVER,

by GEORGE HARLEY, M.D., F.R.S. The operation was regarded as a feasible one under proper antiseptic precautions, and one likely to be attended by permanent benefit when successfully performed.

J. K. THORNTON, ESQ., then read a paper entitled

THE SURGERY OF THE LIVER,

in which all the known operations upon this organ were fully considered.

A. WILLETT, ESQ., followed with a paper on

CHOLECYSTOTOMY,

and HOWARD MARSH, ESQ., of London, reported

A CASE OF ABSCESS OF THE LIVER OPENED BY INCISION,

in which the patient made a good recovery.

LAWSON TAIT, ESQ., then read, for Dr. Mackay, of Huelva, a contribution to

THE SURGICAL TREATMENT OF GALL-STONES.

These papers were discussed together, and the discussion was participated in by a large number of members.

DR. FITCH OWEN, of Nova Scotia, read a paper on the use of

THE DOME-TROCAR

and associated instruments in paracentesis, aspiration, transfusion, ovariotomy, and tunnelling the enlarged prostate.

EDMUND OWEN, ESQ., followed with a paper on

PSOAS ABSCESS,

in which he discussed the questions when and where to evacuate it under antiseptic precautions.

WILLIAM ADAMS, ESQ., of London, read a paper

ON THE TREATMENT OF CONGENITAL DISPLACEMENT,

which is the so-called congenital dislocation of the hip-joint. His method is by long-continued recumbency and extension, and he exhibited his new extension couch.

The Section then adjourned to meet on Friday.

SECTION IN OBSTETRICS.

The Section was called to order by the President, ALFRED MEADOWS, M.D., of London. The first paper was read by W. T. LUSK, M.D., of New York, and entitled

THE PROPER MOMENT FOR THE PERFORMANCE OF GASTROTOMY IN ABDOMINAL PREGNANCY.

It was discussed by Mr. Lawson Tait, of Birmingham, Eng., Dr. H. P. C. Wilson, of Baltimore, Md., the President, T. R. Jessop, T. M. Dolan, A. W. Edis, and Dr. Lusk.

D. BERRY HART, M.D., then read a paper, in which he reported a successful case of

ABDOMINAL SECTION FOR RUPTURED FALLOPIAN TUBE FŒTATION.

It was accompanied by a microscopical examination of the part of the tube removed, which was especially interesting with reference to certain histological and pathological questions.

J. H. AVELING, M.D., reported a case of

EXTRA-UTERINE GESTATION ARRESTED BY ELECTRICITY.

The subject was discussed by C. J. Wright, M.R.C.S., of Leeds; W. Gill Wylie, M.D., of New York; Lawson Tait, Esq.; Drs. W. T. Lusk and H. T. Hanks, of New York, and several others.

DR. RANNEY, of Michigan, read a paper on the

TREATMENT OF MASTITIS,

which was discussed by several members, and was followed by a paper by DR. BEVERLEY, in which twenty cases of

EMMET'S OPERATION

were detailed. This gave rise to discussion, participated in by Drs. Gordon, Kelly, and Wylie, after which the Section adjourned to meet on Friday.

SECTION IN THERAPEUTICS AND PHARMACOLOGY.

The Section was called to order by the President, DR. T. LAUDER BRUNTON, of London, and PROSSER JAMES, M.D., of London, read a paper on

LOCAL ANÆSTHETICS.

This was followed by a discussion on

ANALGESICS,

which was opened by DR. SPENDER, of Bath, and continued by Brown-Séquard, of Paris, Liebreich, of Berlin, the President, and E. Mackey, M.D.

MORTIMER GRANVILLE, M.D., read a paper on

THE RELIEF OF PAIN BY MECHANICAL VIBRATION OR PERCUSSION,

which was followed by one on

THE THERAPEUTIC EFFECT OF COCAINE IN OPHTHALMIC PRACTICE,

by W. H. JESSOP, M.B.

STEPHEN MACKENZIE, M.D., then read a paper on

THE VALUE OF CANNABIS INDICA IN CERTAIN CASES OF HEADACHE.

It was regarded as an efficient remedy, especially in some forms of migraine.

The Section then adjourned to meet on Friday.

FRIDAY, AUGUST 13TH—FOURTH DAY.

The Association convened at 10 A.M., and heard the

ADDRESS IN PUBLIC MEDICINE,

given by E. D. MAPOTHER, M.D., Consulting Medical Officer to the City of Dublin.

It related largely to the status of the medical profession in Ireland, and to its work. Epidemics and alcoholic diseases were of infrequent occurrence in that country. Among the humbler rural classes and the common middle classes the sick poor in Ireland were better cared for than in any other country—thanks to the Medical Charities Act. College hospitals for infectious diseases were needed. Provident dispensaries were unknown in Ireland, except a few in large towns. The county infirmaries were well managed, and there was no city in the world where so many hospitals existed in proportion to the population as in Dublin, where there were ten hospitals.

The speaker then referred to the two professional occupations suitable for women, namely, mechanical dentistry and dispensing medicines. With reference to allied sciences, there was no teaching of veterinary medicine in Ireland.

On motion by Richard Patrick B. Taaffe, M.D., of Brighton, seconded by Surgeon-General Moore, Dr. Mapother received the hearty thanks of the Association, for his able address.

CONCLUDING MEETING—HONORARY MEMBERS, ETC.

The concluding general meeting was held at 4 P.M., and at 8 P.M. a brilliant reception was given by the Mayor of Brighton.

At the concluding meeting Drs. N. S. Davis, of Chicago, John S. Billings, of Washington, J. A. Grant, of Ottawa, and Kingston, of Montreal, were elected honorary members.

After the reading of several reports from standing committees, on medical reform, parliamentary bills, scientific grants, collective investigation, etc., and the adoption of the usual votes of thanks to the President, citizens, etc., the Association adjourned.

The attendance during the annual meeting numbered nearly sixteen hundred.

On Saturday, August 14th, numerous excursions were given, and thus closed one of the most successful meetings in the history of the Association.

MEETINGS OF SECTIONS.

SECTION IN MEDICINE.

DR. RADCLIFFE CROCKER gave a demonstration

ON THE REMOVAL OF HAIR BY ELECTROLYSIS.

This was followed by a paper on

THE ETIOLOGY OF RHEUMATISM,

by A. MANTLE, M.D., in which the author considered his subject from the bacterial standpoint, and exhibited specimens of the micro-organism he had found in rheumatism.

DR. HAYCRAFT then read a paper on

THE RELATION OF COAGULATION OF BLOOD TO DISEASE,

in which he made special reference to the more modern views concerning the exact factors in the process.

A paper on a cognate subject, and entitled

INADEQUATE TREATMENT OF ANÆMIA,

was read by SIR DYCE DUCKWORTH.

DR. RADCLIFFE CROCKER also read a paper on

RECURRING ECZEMA,

which was followed by one

ON COMPRESSED AND RAREFIED AIR,

by A. GAMGEE, M.D.

SECTION IN SURGERY.

MR. ERICHSEN, President, called the Section to order at 11 A.M., and VICTOR HORSLEY, of London, read a paper on

THE ADVANCES IN THE SURGERY OF THE CENTRAL NERVOUS SYSTEM,

which he illustrated by means of photographs and the lime-light. The paper was one of the most interesting presented to the Association, and was discussed by Professor Charcot, of Paris, and J. Hughlings Jackson.

BRUCE CLARKE, ESQ., and W. E. STEAVENSON, M.D., read papers on

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

REGINALD HARRISON, ESQ., of Liverpool, read a paper on

URETHRAL STRICTURE,

in which he set forth the advantages arising from the treatment by internal and external urethrotomy combined.

NOBLE SMITH, ESQ., read a paper on

OBSCURE DISEASE OF THE SPINE

pertaining to both bony and soft structures, and its relation to severe surgical injuries.

SIR WILLIAM STOKES, of Dublin, followed with a paper on

ACUTE MYXŒDEMA OCCURRING SOON AFTER THE REMOVAL OF THE THYROID BODY.

WALTER WHITEHEAD, ESQ., reported three hundred consecutive cases of

HÆMORRHOIDS CURED BY EXCISION,

thus exhibiting a remarkable surgical success.

S. BENTON, ESQ., read a paper on

FISTULA IN ANO,

in which he directed special attention to the horse-shoe variety, and its radical cure.

This was followed by a paper on

THE SURGICAL TREATMENT OF ACNE AND LUPUS,

by JAMES STARTIN, ESQ., who reviewed the methods by caustics, the use of the actual cautery, and by excision, puncture, etc.

THE SURGICAL TREATMENT OF CERTAIN TUMORS OF THE NECK,

was the title of a paper read by F. B. JESSETT, ESQ., after which the Section adjourned.

SECTION IN OBSTETRICS.

The subject for discussion was

REMOVAL OF THE UTERINE APPENDAGES.

The discussion was opened by Dr. Savage, of Birmingham, continued by Dr. More Madden, of Dublin, Dr. Imlach, of Liverpool, Mr. Lawson Tait, of Birmingham, and others. The tenor of the discussion was like that unto which reference can be made in nearly all the current medical periodicals of the day.

J. W. BALLANTYNE, M.B., of Edinburgh, exhibited

SPHYGMOGRAPHIC TRACINGS IN LABOR AND THE PUERPERIUM,

which was followed by a paper on

THE USE OF STEM PESSARIES,

by J. GORDON BLACK, M.D., of Harrogate.

DR. T. M. DOLAN then related several obstetric experiences, and made observations on the cases reported.

DR. A. W. EDIS read the last paper, which was entitled,

CASES ILLUSTRATING THE DIFFICULTIES OF DIAGNOSIS IN GYNECOLOGICAL PRACTICE.

Judging from the errors that have been made, all such cases are worthy of special consideration.

MISSISSIPPI VALLEY MEDICAL SOCIETY.

Twelfth Annual Session, held at Quincy, Ill., July 12, 1886.

THE above Society met on July 12th, DR. ARCHIBALD DIXON, of Henderson, Ky., President, in the chair; DR. E. B. MONTGOMERY, of Quincy, Secretary *pro tem.*

DR. H. M. LANE, of Carthage, Mo., read a paper on

YELLOW FEVER IN BRAZIL.

The Doctor had been on the ground, and related his own experience and observation in dealing with this disease by Freire's method. He gave in detail the manner of preparing the virus for inoculation, and recommended that this Society should memorialize Congress, asking the appointment of a committee to investigate this method, with a view to introducing it into this country.

DR. LOUIS BAUER, of St. Louis, presented a patient on whom he had performed laparotomy for symptoms of ileus. He found

AN ABSCESS IN THE LIVER,

from which he drew off a quart of pus, then opened more freely and washed out the cavity with an antiseptic fluid. A portion of the gall-bladder sloughed out, and the large intestine was perforated, but no constitutional disturbance resulted. The Doctor believed with Lawson Tait that laparotomy was frequently useful. Discussed by Drs. Beard, of Vincennes, Ind., and Bernays, of St. Louis.

DR. F. W. BEARD, of Vincennes, related a case where he had observed

SEMINAL EMISSIONS AT DEATH FROM HANGING.

DR. A. H OHMANN-DUMESNIL, of St. Louis, read a paper on

LUPUS ERYTHEMATOSUS

and reported a case. The patient was a farmer, aged fifty-two, who had always been in good health. The lupus involved the dorsum of the hand and arm, and occasioned no complaint on the part of the patient. He illustrated the pathology of the disease by several very fine microscopical specimens. As to treatment, he used a concentrated solution of lactic acid. Photographs of the case were also shown.

DR. ROBERT BARCLAY, of St. Louis, in a paper on

NOISES IN THE HEAD AND EARS,

devoted especial attention to the pathological conditions giving rise to them and their treatment.

The President, DR. ARCHIBALD DIXON, of Henderson, Ky., read a paper entitled

PERINEAL LACERATIONS.

He greatly favored Simon's method of repair.

DR. FRANK R. FRY, of St. Louis, read a paper on the "Etiology of Chorea." He advocated the neurotic theory and opposed the embolic. The exciting causes he thought to be various.

On motion of DR. DUDLEY S. REYNOLDS, of Louisville, the Society adopted the Code of Ethics of the American Medical Association.

DR. HENRY M. LYMAN, of Chicago, read a paper on the

DISCOVERY OF ANÆSTHETICS,

going thoroughly into the history of the subject.

DR. DUDLEY S. REYNOLDS, of Louisville, read a paper on

OPTICAL DEFECTS AND THEIR CORRECTION.

He exhibited an instrument for the measurement of the lenses. Its recommendation was simplicity.

DR. J. L. GRAY, of Chicago, showed a stomach-pump, with siphon attachment, which could be useful in introducing aliment or washing out the stomach.

DR. E. B. MONTGOMERY, of St. Louis, read a paper entitled

THE THERAPEUTICS OF HOT WATER.

He detailed its uses in a great variety of conditions. This paper was extensively discussed.

DR. L. H. COHEN, of Quincy, read a paper on "Electro-Therapeutics."

DR. J. N. LOVE, of St. Louis, read a paper on

ARTIFICIAL ALIMENTATION,

in which he discussed especially the absorptive power of the rectum.

Officers were elected as follows:

President—I. N. Love, M.D., St. Louis.

First Vice-President—Joseph Robbins, M.D., Quincy.

Second Vice-President—Jacob L. Geiger, M.D., St. Joseph, Mo.

Third Vice-President—T. B. Harvey, M.D., Indianapolis.

Secretary—J. L. Gray, M.D., Chicago.

Treasurer—A. H. Ohmann-Dumesnil, M.D., St. Louis.

Assistant Secretary—Edward Alcorn, Houstonville, Ky.

DR. AMOS SAWYER, of Hillsboro, Ill., read a paper on

THE THERAPEUTICS OF SUBNITRATE OF BISMUTH AND ASCLEPIAS TUBEROSA.

The author opened with the assertion that acology had been inexcusably neglected in our Society proceedings. The author thought that one of the principal therapeutic effects of bismuth was its power to coagulate mucus. He had used the subnitrate of bismuth to coagulate the mucus in throat and nasal troubles.

In the tormina of dysentery, so distressing to the patient, the fluid extract of asclepias tuberosa, in teaspoonful doses, every two hours. A warm infusion of the fresh root also acts like a charm. In drachm doses every two hours it relieves the pain of acute muscular rheumatism in from six to eight hours; also the severe pains of pneumonia are relieved by it. Asclepias tuberosa is certainly a sudorific anodyne, and occasionally, through an idiosyncrasy, an emetic.

Dr. A. C. Bernays, of St. Louis, reported an operation for

LIGATING BOTH VERTEBRAL ARTERIES

in a case of epilepsy. The patient, a boy, aged twelve years, had had fits for seven years, sometimes over one hundred per day. Occasionally free intervals of several weeks. No hereditary encumbrance, no physical infirmities; well developed and tall for his age. Both arteries were tied. The ligature of the artery on the right side was very tedious, on account of venous hemorrhage from the perivertebral plexus, and on account of an abnormal course of the artery. It was but half the normal size, and skipped the sixth vertebra, running toward the median line to enter some vertebra higher up. This operation lasted about two hours. The left vertebral artery was tied, just as it entered the transverse process of the sixth cervical, in the usual way. It was somewhat larger than was suspected. Only ten minutes were required for this ligature. The incision was made to the outside of the external jugular vein, parallel to the rear border of the sterno-cleido-mastoid muscle, beginning half an inch above the clavicle, and extending 2.5 inches upward. The reporter made anatomical demonstration, and showed that the artery could be tied as it passes over the massa lateralis of the atlas, or even between any two vertebræ, after clipping out that part of the transverse process which corresponds to the head and neck of a rib with bone nippers. The essayist showed that the operation was not nearly so difficult and dangerous as would be supposed, judging from its anatomical relation and depth. The case did well; the wounds healed kindly, and there were no spasms since the operation up to the time at which the boy left the hospital for his home. The pulse ran up to 180, and the respirations to 58 per minute, immediately after the operation, and only returned toward the normal condition very slowly. The temperature was nearly normal on the second day. This remarkable height reached by pulse and respiration is a most interesting observation. It can be accounted for by the following reasoning, based on physiological facts: The medulla oblongata receives almost its entire blood-supply from the vertebral arteries. The pneumogastric nerve-centres are located in the medulla oblongata, near the calamus scriptorius. By cutting off the direct blood-supply the inhibitory centres are deprived of proper nourishment, and their action impaired. Therefore we can readily understand that the accelerating centres of the sympathetic held full sway until the collateral circulation was more or less perfectly established.

The reporter gave statistics in regard to the operation, which he thought was very much neglected in this country, in spite of the encouraging experiences of Alexander, of Liverpool, who had cured, or benefited, more than half of his cases.

The Doctor also showed a post-mortem specimen, a lady who had died from rupture of the cyst in

EXTRA-UTERINE PREGNANCY,

and consequent hemorrhage. The specimen showed a double uterus, with the fœtus in the left Fallopian tube.

A very enjoyable reception was given at the residence of Dr. R. W. McMahon.

The next meeting will be held at Crab Orchard Springs, Ky., the second Tuesday in July, 1887.

Roman Law and Medical Practice.—The Roman laws ordained, says Montesquieu, that physicians should be punished for neglect or unskilfulness. In treatment, if the physician was a person of any fortune or rank, he was condemned to deportation; but if he was of a low condition in society he was put to death, which was rather hard on the said physician of low condition.

A Cut in Time saves nine.

Correspondence.

LITHOLAPAXY IN BOSTON.

To the Editor of The Medical Record.

Sir: Under the heading "Operations for Stone in the Bladder" the Philadelphia *Medical News* of June 19th last, in an editorial, presents some views on the outlook for litholapaxy which are in a measure discouraging. The article states that "this method is practically applicable only to calculi of moderate size, and requires a degree of skill and experience on the part of the operator which cannot always be found. The consequence has been a more frequent return to cutting operations than was expected in view of the earliest achievements of litholapaxy." Since the introduction of Professor Bigelow's improvements in the method of crushing and evacuating stone in the bladder, no case has presented itself at the Massachusetts General Hospital which has, on account of the size or hardness of the stone, necessitated resort to a cutting operation. Practically the question of size is not to be considered, since any stone small enough to admit of some portion of its circumference being seized between the blades of the lithotrite can, providing it is not too hard, be successfully crushed and evacuated. The hardest form of calculus is that composed of oxalate of lime. In August last Dr. Beach removed, at the Massachusetts General Hospital, a stone of this character weighing 34.68 grammes. As is always done here when the urethral orifice is not up to the normal calibre of the remainder of the canal, the meatus was cut preparatory to the introduction of the largest-sized lithotrite. The stone was readily grasped, but only cracked after several attempts. Each fragment had to be crushed with the screw. Stones of this character are frequently considered as being beyond the scope of the lithotrite, and are removed by a cutting operation. The eight years during which Professor Bigelow's improvements have been in practice here have evidently not been enough to introduce them thoroughly elsewhere. The evidence which the clinic at the Massachusetts Hospital has thus far furnished would seem to show that litholapaxy must only be abandoned when a stone is diverticulated, or the urethra not sufficiently developed, as in children. Numerous cases are reported where enormous prostate hypertrophy prevented complete crushing, and the stones had to be cut for. Dittle and Bois each report a case where, owing to an anchylosed, strongly flexed, adducted, and inward rotated thigh, the lithotrite could not be used.

Boston.

THE TREATMENT OF IVY-POISONING.

To the Editor of The Medical Record.

Sir: In an editorial on the subject of rhus-poisoning, in The Record of July 31st, the statement is made that specifics for this affection do not in reality exist, and that the most that can be done is to palliate the symptoms, and, perhaps, shorten the period of the inflammation. I am convinced that in this you are mistaken, and that in bromine we have a specific which, when properly applied, will in every case cut short the attack within twenty-four to forty-eight hours after the first application.

I have used it now in nearly a hundred cases with this invariable result, and many of my medical friends have had the same experience, while I have yet to hear of a single unsuccessful trial. I have used it in cases of great severity, and also in cases which had long resisted treatment. Once during my service in the navy I was stationed where there were some five hundred recruits, who spent a good deal of their leisure time upon a tract of ground where the *rhus radicans* abounds, so that I had a number of new cases of poisoning each day. At this time an officer joined us who had been suffering for five weeks. The application cured him at once. Being un-

usually susceptible to the action of the poison and seeing the promptness of the cures daily effected, he conceived the idea that by having the whole skin affected and then cured, he might purchase immunity from future attacks. He therefore gathered the leaves of the plant, bruised them, and rubbed the juice upon the entire surface of the body. I saw him in about sixteen hours after the application. He was standing naked in the middle of the floor, unable to sit or lie, or bear any clothes to touch him. He was greatly swollen, especially about the genitals and face; his features were nearly obliterated, and his eyes were buried by the tumefaction. He was suffering greatly from pain and the discomfort of his condition. His temperature was elevated two degrees, and his pulse was 110°. I caused the application to be made at once to every part of the body. Relief was almost immediate. Pain and swelling began at once to subside, temperature became normal; in twenty-four hours he was able for duty; in forty-eight hours every trace of his experiment had vanished. Not a single vesicle formed. (This case was reported in 1883, before the Dakota Medical Association.)

I cannot but believe that my constant success in such a large number of cases spread over twelve years' practice and treated in the West Indies, the Pacific Islands, California, Dakota, and elsewhere, is due to the specific power of bromine. At all events my experience shows an extraordinary result, and seems to justify my once more urging the agent before your notice. It was first presented in THE RECORD of May 20, 1878. The formula used is:

℞. Bromi..... gtt. xv.
Ol. olivæ..... ℥ j.

M. S.—Apply freely to poisoned surface four times a day. Wash with warm water and castile soap twice a day.

The solution should always be fresh, as it deteriorates by evaporation even when cooked.

Respectfully yours,
S. A. BROWN, M.D.

SIOUX FALLS, DAK., August 4, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dermatitis Venenata—the inflammation produced by poison-oak or ivy, is claiming attention. It isn't infrequent with us; is most times obstinate, always annoying and painful. Have myself been a victim more than once, and know experimentally the exquisite torments of the affection, and the inefficacy of much of the treatment as well.

Was suffering from a particularly trying attack some years ago; both arms were well-nigh raw to the shoulders, and there is no adjective to qualify the torment I endured. Everything had failed me, and in my desperation I thought of mur. tinct. iron locally—my clearest idea being that the smart of the remedy might at least obscure that of the disease. In this I wasn't disappointed. I incautiously mopped both arms rapidly and thoroughly. For twenty or thirty minutes my sensations were varied and lively; after which, the disturbance subsiding, I decomposed the tinct. with a wash of soap and water, completing the treatment with a dressing of olive oil. Relief was immediate and complete, desquamation ensuing within a few days.

Have used the tinct. in numerous instances since, and with uniform results. More than one application has rarely been necessary, and when so, only I think because the first was not thorough. Within a few days my own son came home to me with both feet and ankles so inflamed from this poison as to practically disable him. It was of two weeks duration, the usual remedies giving no relief. One thorough application of the tinct. was all that was required.

In children, or nervous, susceptible patients, where the abrasions from inevitable scratching are extensive, it is well to advise them of the sharp, but transient, burning attending its use. Either so, or apply it gradually, giving time for accommodation of parts, etc. I use it full strength, and as we do iodine.

There is nothing *specific* in the action of the drug; nor do I use it empirically. This form of dermatitis differs from others of its class only in its source or origin—the rhus family being responsible here. The condition is one of inflammation of the derma, probably just the same as in traumatism, the application of heat, cold, etc., and characterized, in degree, by the usual *neber*, *caler*, *doler*, with intolerable itching as a harrassing climax. The usual local sedatives and mild astringents do not answer—their action is too superficial. Cauterants, of course, are out of the question. But something from the border-line between the two—from among the stronger astringents, of which the mur. tinct. is fairly typical—meets the demand, and accords with principle. The use of it, too, is free from the objection to carbolic acid (probably as efficient in equivalent strength) in that neither possible idiosyncrasy obtains, nor is there local or general trouble to be apprehended from its employment.

I think any patient thus racked may rather confidently expect prompt relief from the thorough use of the tinct. as above, in any stage. A little pluck to endure the stinging pain for a few minutes is the only prerequisite. Short acquaintance with the affection will render any change welcome. Very respectfully,

A. G. BROWNING, M.D.

MAYSVILLE, KY., August, 12, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Spirits of turpentine applied, if possible, before the vesicles rupture, is an efficient application in rhus-poisoning. I am, sir, Very respectfully yours, etc.,

T. E. WILCOX, M.D.,
Assistant Surgeon U. S. Army.

WASHINGTON BARRACKS, D. C., August 6, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I was somewhat disappointed in readinng your editorial in THE RECORD of July 31st on "The Treatment of Rhus-Poisoning"—disappointed, because I expected to find, somewhere in the body of the article, something confirmatory of the virtues of a solution of the bichloride of mercury as a topical remedy in the therapy of this dermatitis.

I can assure you of the specific virtues of the bichloride in the treatment of rhus-poisoning. The poison-oak abounds in this section, and I have had repeated opportunities for making observations with various remedies, and have abandoned all, except a ten to twenty grain solution of corrosive sublimate, as it has proved to be a specific in my hands. I have kept no record of cases so treated, but can state most positively, that if applied on the second or third day of invasion, that a cure will follow as rapidly as a cure could be expected to obtain. In other words, the bichloride stops the inflammatory action at once, and resolution proceeds from thence to a complete relief. For purposes of safety, I sometimes repeat the application a second time, but in the large majority of cases, a single one suffices for a complete and immediate cure.

WILLIAM B. DAVIS, M.D.

GRAPEVINE, TARRANT COUNTY, TEX.

SOME FURTHER REMARKS ON THE DEATH-PENALTY AND METHOD OF INFLICTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I was much interested in an article appearing in THE MEDICAL RECORD of July 24th, by Dr. Wooster Beach, of New York, in regard to the death-penalty and methods of infliction.

Dealing as it does with so serious a matter, it cannot be other than a question of extreme importance; a question of importance from various stand-points—popular, moral, medical, and legal; let me combine the last two, medico-legal. The first two can be passed by as being outside the pale of discussion in a purely medical journal, while the last two may be retained as presenting grounds for general remarks, since they so often are found hand in hand, especially in questions like the above.

In this country, as is well known, hanging is and has been for some time the method of inflicting the death-penalty, and although on many occasions it has been severely attacked, and at times has, as in Maine, Iowa, and Wisconsin, been abolished, yet only to be resumed, it now remains the accepted form of punishment, the chief reason of this being, no doubt, the wholesome dread which such a method of death holds over the heads of those who are tempted to commit such crimes as demand capital punishment. Now, so long as this fear actually exercises and brings about a marked decrease in the percentage of such crimes, no doubt this form of inflicting the death-penalty, or one equally efficacious, will be retained, however revolting such a death seems to the public mind, especially when accompanied by such awkward and disgusting blunders as we frequently see laid at the doors of those whose duty it is to inflict the death-penalty!—a seeming relic of barbarism, or a relic of barbaric customs prolonged into the nineteenth century!

Dr. Beach in his article has enumerated various other forms of death, some of which have long been used in other lands, as the guillotine in France, garroting in Spain, etc., but he speaks of one which I desire especially to refer to, viz., death by the use of an anæsthetic (chloroform or ether).

Now it is quite generally known, I apprehend, how easy and painless a death can be produced by the use of this powerful agent (chloroform), and right here it may be remarked how strange it is that individuals bent on self-destruction will adopt all sorts of horrible methods to accomplish their object, as cutting the throat, shooting, the use of violent poisons, and the very method we have been speaking of—hanging—rather than drop into oblivion by inhaling a few drops of chloroform from the midst of a cluster of heliotrope, as a famous novelist has graphically put it.

To return to the use of chloroform as a means of inflicting the death-penalty.

How often has the experimenter and physiologist, while eagerly at work in his laboratory, attempting to unfold some new truth or striving to clear up some not yet quite decided or fully understood question of function or action of organ or nerve, exclaimed, "Oh, if it were only possible for us to conduct our examinations on man himself!" But up to the present time he has sighed in vain, and has gone on doing the best he could, confining his researches to cat, dog, or monkey, being obliged to judge only by analogy or approximate similarity found existing in the ascending grades of animal life.

And now, without further introduction, comes my plan, and though it may seem very visionary at the present time, let it be remembered that "great oaks from little acorns grow."

Let every criminal sentenced to suffer the extreme penalty of the law be delivered over to our most accomplished experts in comparative anatomy and savants in medicine; have these gentlemen authorized to experiment as they shall see fit upon such criminals, only that all such experimentation shall be made in the presence of a committee of medico-legal officers chosen by the Government, whose duty it shall be to see that the full letter of the agreement be carried out, viz., that from the time the culprit passes into the hands of the scientists, until his death shall have taken place, he shall suffer no pain or distress, other than that incidental to passing under the influence of the anæsthetic, and after his death the remains shall be disposed of as in the case of hanging by the sheriff.

The wished-for insensibility shall be initiated by ether if thought proper, and the individual shall never be permitted to recover consciousness, or any condition approaching it, again; he shall be kept under the influence of the anæsthetic a sufficient length of time to insure the success of the experiment, or such length of time as those present shall think advisable, and then the anæsthetic shall be pushed to the extreme, and so bring to a close the life which was condemned because it took life.

What a splendid field of investigation and research, for denial or corroboration of those principles already supposed to be clearly understood, as well as the certainty of discovering new truths, would be opened to the medical profession, and through the profession to mankind in general!

To be sure, we could not make certain experiments on the body of the criminal while unconscious, and then allow him to recover, so that we could await the results, as in the case of animals; nevertheless, that a vast deal could be accomplished no one will deny.

Now, as regards the influence such a method of punishment would have on those tempted by one cause or another to render themselves liable to the death-penalty.

If we can judge at all by the horror which people in general have of vivisection, we should have no need of a death-penalty for a long while!

The would-be murderer, having in view only the knowledge of vivisection as held by the public mind, would not be very prone to run the risk of such a terrible ending should he be apprehended; and yet when a criminal did suffer death in the way above suggested, he really would be executed by the most painless method possible.

In this way two great things would be accomplished: 1st, There would be fewer murders by far; 2d, when one did occur, a compensation for the life that was lost might be found as a germ long hidden, its place of concealment being in the body of the assassin, a germ which in time to come would develop into a boon of priceless value to the sons of men.

J. B. Thornton, Jr., M.D.

Scarboro, Me.

WHAT CAN WE CURE?

To the Editor of The Medical Record.

When one takes up a new work on the practice of medicine and contrasts it with one written a century ago, he finds far more diagnosis and pathology, but less therapeutics. A more accurate account of the part played by drugs in the cure of disease has entombed a good many specifics. Whole classes of remedies are left out of modern therapeutics.

Others, while retaining a feeble existence, are destined to go sooner or later.

Lithontriptics to dissolve stone in the bladder are defunct; emmenagogues are in a decline; expectorants show evident weakness.

That any drug is possessed of power, *per se*, to produce the menstrual flow, has ceased to be believed by the profession.

Dr. Meigs called emmenagogues "hen-persuaders." A patented hen's nest was so constructed that the eggs would drop out of the nest so soon as layed, whereupon the hen would lay again. There was no end to the number of eggs that could be produced in this way.

Expectorants were believed to possess some inherent power of hunting for the lungs, and loosening adhesive mucus from the bronchial tubes. Some doctors still believe that squills, ipecac, and senega possess some power to get phlegm out of the lungs.

These so-called expectorants once had much reputation in the treatment of pneumonia.

They were supposed in some unknown way to get the exudation loosened and "spit up."

This is now a vain hope. There is not the slightest evidence that any known drug has any such special affinity for the lungs.

Some men are always in a fog in the treatment of pneumonia.

Most of the remedies in use for this malady have harmed the patient more than the disease.

> "Like blind men fighting in the dark,
> They never fail to miss the mark;
> When death doth fail, the doctor's sure
> To meekly stand and claim the cure."

The better class of physicians are not expecting honors from prescriptions. Flint was no drugger. Holmes is a medical sceptic. Bennett, before whom the dosers and druggers quail, says there are but four drugs known whose effects are unquestionably beneficial in particular diseases. They are: 1, Quinine in ague; 2, pitch ointment in psoriasis; 3, male shield fern in tape-worm; 4, sulphur ointment in scabies.

In the days of our ignorance we hoped to shorten the course of measles, scarlet fever, small-pox, and typhoid fever. To-day we count on our fingers to measure the day of crisis—of typical endings. Acute ophthalmia, superficial erysipelas, and sporadic flux are found to be self-limited. Nitrate of silver, sugar of lead, sulphate of iron, iodine, et cetera, have all lost their reputation for limiting the spread. Whatever is used, the spreading ends in three or four days. Acute ophthalmia ordinarily ends in fourteen days, doctored or undoctored. Collyriums have made seas of briny tears, but performed no cures.

The land rings with anthems sung to the doctors who have cured sporadix flux. The eclectic and the homœopath have divided honors with the regular physicians in the cures. Most of the patients go abruptly into convalescence on the fourth day. Even that endemic disease, gonorrhœa, which every ignorant and dishonest doctor will promise to cure in five days, Trousseau declares to be the despair of the physician.

Diday says syphilis is cured by the grace of God.

When we cut out the confessedly incurable and the self-limited complaints, we have not got much to work on. The specialist claims what is left. Drugs intelligently used, I doubt not, have often greatly assisted nature in her extremity.

Sulphate of quinine, while it is still prescribed by the routinist in typhoid fever, is eschewed by the more thoughtful men in the profession. Given day after day, to reduce a temperature which comes back day after day until the disease has run its course, was indeed very silly practice, to say nothing of its deleterious effect on the digestive and nervous systems.

"The United States Dispensatory" contains eighteen hundred closely written pages, giving the virtues of innumerable drugs. Yet alcohol and opium are of more value than all the others combined. Opium has assuaged more pain, soothed more sorrows, and saved more lives than all the remedies in the materia medica. Good doctors father no prescriptions, no specifics.

While Ringer is quoted as a believer in specific medication, while his book goes through semi-annual editions, his most vaunted remedies are for functional disorders. A good physician's highest hopes are realized when he has by opium assuaged pain, and by alcohol kept the heart wagging in the decline of some violent malady.

If we have been nature's adjunct in her extremity, we have filled our mission.

Alcohol, though slandered and vilified by fanatics, has saved millions from an untimely end. There seems to be some inexplicable affinity between alcohol and the human system. The higher the civilization the more apparent the affinity. Noah, who built the mammoth ship that saved the world, felt its soothing influence; while Solomon, the wisest of mankind, like Mohammed, interdicting wine, fell the victim of a more ravishing vice.

Noah's first thought, when his boat landed, was wine. He planted his vineyard before his corn or tobacco. The Bible says, "Give wine to him who is of sad heart, and strong drink to him who is ready to perish." But as this is not a dissertation on prohibition, æsthetics, psychology, or divinity, I will not pursue this thought further.

A doctor's faith in physic is the measure of his intellect. It is always in inverse proportion. Confidence in God and nature points to large comprehension.

When we look upon the countless millions who have lived their allotted time undoctored and undrugged, our faith in physic weakens. With all our knowledge, all our skill, we give out at threescore and ten. The divine appointment of death robs us of Utopian hope in drugs. Impossibility of proof of demonstration is at the bottom of endless controversy in medicine and divinity. We all agree about the multiplication-table. Truth is mightier than lore—than authority.

The strife between nature and art in the cure of disease has resulted in a victory for the former. Nature, unadvertised, has won a thousand trophies to one of art, whose seas of ink have been drained to prove one cure.

G. M. Dewey, M.D.

Keytesville, Mo., August 4, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 8 to August 14, 1886.

Sternberg, George M., Major and Surgeon. Granted leave of absence for fifteen days. S. O. 186, A. G. O., August 12, 1886.

Wolverton, William D., Major and Surgeon. Granted one month's leave of absence, to commence on or about August 15, 1886. S. O. 104, Division of the Atlantic, August 7, 1886.

Loring, Leonard Y., Captain and Assistant Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability, with permission to apply for an extension of two months. S. O. 59, Division of the Pacific, August 2, 1886.

Adair, George W., Captain and Assistant Surgeon. Ordered for duty as post surgeon at Fort Brady, Mich. S. O. 103, Division of the Atlantic, August 6, 1886.

Gandy, Charles M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 103, Division of the Atlantic, August 6, 1886.

Merrill, James C., Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Klamath, Ore. S. O. 130, Department of Colorado, July 30, 1886.

Benham, Robert B., Captain and Assistant Surgeon. Relieved from temporary duty at Fort Omaha, Neb., and ordered to Fort Bridger, Wyo. S. O. 97, Department of the Platte, August 5, 1886.

Hopkins, W. E., First Lieutenant and Assistant Surgeon. Ordered from Fort Lowell, Arizona Terr., to Angel Island, Cal., for duty as post surgeon. S. O. 61, Division of the Pacific, August 6, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended August 14, 1886.

Walton, Thomas C., Surgeon. To remain on present duty until September 1, 1887.

White, C. H., Surgeon. To remain on present duty until August 21, 1887.

Rush, C. W., Passed Assistant Surgeon. Authorized to delay ten days, under orders to Sitka, Alaska.

Lumsden, G. P., Passed Assistant Surgeon. Ordered to Hospital, Mare Island, Cal.

Baldwin, L. B., Passed Assistant Surgeon. Ordered to U. S. S. Ranger.

Neilson, J. L., Surgeon. Detached from the U. S. S. Ranger, proceed home, and wait orders.

The Medical Record

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MEDICAL LIBRARY OF THE BOSTON CITY HOSPITAL

Original Articles.

MANGANESE IN THE TREATMENT OF MENSTRUAL DISORDERS.[1]

BY THOMAS J. KEARNEY, M.D.,

NEW YORK.

MY justification for presenting this paper is merely to relate three or four cases which, as far as they go, corroborate what has been claimed for the remedy, hoping, at the same time, to excite discussion of the subject, and thereby to elicit your experience not with manganese alone, but with the many remedies used in menstrual troubles. It was my intention, originally, to present a historical summary of what has been observed and written on the subject, but I find that this has been quite recently done in an able manner by Dr. C. E. Billington, of this city, in a paper which he read before the Section on Materia Medica and Therapeutics of the Academy of Medicine, and published in THE MEDICAL RECORD of March 6th of the present year.

Manganese is now the fashionable topic. I need not tell you that in medicine, as in society, one of the greatest motor forces is the tyrant fashion. This fact is patent at every turn one makes. You all remember that but a few years ago the most extravagant claims were made for condurango in the treatment of cancer; that eucalyptus was to supersede quinia in malaria; that the unfortunate male organ of generation (the portal through which is introduced so much of the misery that afflicts humanity) was made the prey of the surgeon's knife, with the assurance that through such procedure a revolution in the domain of neurology was to be effected. Now fashion has ceased her plague of the male sex, and is turning her attention with increased interest and renewed energy to our sisters. Behold the transformation in female anatomy and physiology that is being brought about under the new dispensation of gynecology in our day! What marvellous results, successful or otherwise, are being achieved! Some are inclined to think that ovarian surgery may be carried too far; that the propagation of the race may be seriously curtailed, if not arrested, unless, indeed, the physiologist discover some other than the old-fashioned method of conception.

But condurango, eucalyptus, and circumcision have been relegated to their proper sphere in therapeutics. It may be said that manganese is now usurping the place once occupied by the remedies to which I have above alluded, and that fashion, rather than real merit, is the cause of its popularity. I cannot deny that this is, to some extent, true—herein lies one of the dangers to be avoided; yet there are certain phases in its history which go to show that it is not to be classed with merely fashionable remedies. In the first place, manganese has not suddenly sprung into prominent notice, its acceptance has been slow, and its claims have been met with intelligent scepticism; in the second place, I think anyone who has examined the clinical evidences will acknowledge that it has a decided influence on the female generative organs in a certain class of cases.

In a very careful study of all I could find written on this subject, I have failed to find that anyone claims anything extraordinary for manganese. No prophecies of a revolutionizing character are assured through its agency. The earliest recorded case of amenorrhœa cured by manganese is reported by Dr. Henry Broadbent, in the "Proceedings of the Clinical Society of London for 1868–69," vol. ii., p. 122. It was a case of three months' standing, in which manganese chlor., gr. ij., with quin. sulph., gr. j., t.i.d., was given, with the effect of producing the menstrual flow in thirty-six days. I should state that Broadbent gave the remedy for its tonic effect alone, and with no view to the establishment of the menses directly. To Ringer and Murrell, however, we are indebted for first bringing manganese forward as an agent in amenorrhœa.

The credit of the first considerable contribution, in this country, to the study of manganese is due to Martin, of Chicago. He has employed the drug not in amenorrhœa alone, but in menorrhagia and metrorrhagia as well.

My experience has not been large enough to warrant me in holding decided views, yet I feel called upon to record what few cases I have had, and to discuss some questions of a general character in relation to menstrual disorders.

I began to use manganese in October, 1883, shortly after the appearance of Martin's first article. I have prescribed it in its different forms altogether in ten cases. In seven I used the permanganate of potash, but it became necessary to discontinue it after the first dose in consequence of the great irritability of the stomach it caused. The patients, in fact, became refractory, and would no longer submit to treatment because of what they considered the poisonous effects of the drug. They almost invariably experienced vomiting, and a sense as if a knife were being driven through the upper part of the chest, while some had, in addition to these symptoms, pretty bad abdominal pains and burnings. I have kept notes of three cases in which I have had very gratifying success, and which I will relate in the order in which I treated them.

CASE I.—Mary B——, aged twenty-six, single, U. S. Is a healthy, well-developed young woman, who, with some anxiety, consulted me in October, 1883. Stated that up to two months before she had always menstruated regularly. In the last two periods she had been irregular; menstrual flow coming on a week later, scanty in amount, and color each time becoming much lighter. I ordered potass. permanganat. in capsules, each containing two grains, one to be taken night and morning. Took one that night, and found that the flow came on very profusely in bed. Took no more, because the flow was greater than she thought normal. After this she continued regular until March 14, 1886, when she called on me, complaining that she was two weeks over her time. Having assured myself that she was not pregnant, I prescribed pills containing gr. ij. manganese binoxid., with directions to take two t.i.d. Courses came on profusely on the morning of the 17th, after having taken ten pills.

CASE II.—Annie F——, aged twenty, single, U. S. Is of delicate constitution. Has been under my care for the past three months for bronchitis, with circumscribed consolidation of both apices, during which time she has been taking cod-liver oil and iron. Called for advice and treatment, October 10, 1883. For the past eighteen months or two years menses have been irregular, sometimes too late, often too early, scanty, of pale color; is unwell for three days. Her general con-

[1] Read before the New York Medical Union, June 8, 1886.

dition now is good. Ordered potass. permanganat., gr. ij., in capsules, t.i.d. Took medicine for two days. Menses came on profusely. After taking first capsule felt pain, constriction, and burning of throat. This trouble was less after taking the other doses.

March 22, 1886: Has been quite regular since last note, which is more than two years and a half ago; quantity and quality normal.

CASE III.—Mrs. A. K——, widow, aged twenty-six, U. S. Has always had excellent health, and has good family history. Has had one child. Menstruated first time at twelve years and six months; habit every three weeks, lasting five days, very profuse, with some pain; noticed that since birth of her child, which was five years ago, she began to grow very stout and at the same time to become irregular; is unwell only two or three hours, quantity small, and color pale; during her period has flashes of heat, dizziness, and headache; constipated; has enormous appetite, but no dyspepsia; she leads an indolent life, remaining indoors all the time and taking no exercise. She consulted me for these troubles in January, 1884. Ordered permanganate, gr. ij., t.i.d., in a goblet of water, for two or three days before the expected period; to take physical exercise, regulation of the diet and bowels. In the middle of the night, four or five days after this, and without having taken any medicine, she began to menstruate as usual, scantily. Took gr. ij. of permanganate next day three times, when flow became very abundant, so much so that she discontinued the medicine immediately; had to use eight or nine napkins.

February 15, 1884.—Took the medicine as ordered, yesterday, but had to discontinue it because of the stomach irritability it occasioned.

February 21st.—Patient returned to-day, and says that she afterward persevered with the medicine, but that the menstrual flow did not appear at all; head feels full and dizzy, otherwise well, as she has reduced a good deal in weight from the long walks she takes every day.

April 8th.—Expects to be unwell on the 9th or 10th; headache, fulness and throbbing of temples, and feeling as if she were going to bleed at nose. Ordered potass. permanganate in pill, gr. j., made up with paraffine, after each meal.

April 19th.—Patient did not begin to take her pills until to-day. Menstruation began immediately, and continued until the 22d, during which time she took fourteen grains in all; flow profuse.

May 10th.—Began to take pills of manganese binoxid., gr. ij., t.i.d., on the 8th inst.; became unwell that night, and still continues so. All disagreeable symptoms have disappeared.

September 23d (four months afterward).—Has been regular since last note; health excellent.

The subject of Case I. related to me the case of a young woman, with whom she worked, and to whom she gave one of the capsules of permanganate. This young woman had then (June, 1884) not menstruated for two months, and had been irregular for a year and a half. To use my informant's language, the medicine threw the patient into spasms and the menstrual flow came on in about half an hour. She complained also of distress at superior part of the sternum.

Certain reflections have been prompted by a consideration of these cases. In Case I., and in that of the girl to whom she gave the capsule, the menses came on after having taken but gr. ij. of the permanganate. No doubt you will ask yourselves, as I often have, was the menstrual flow produced by the remedy? I am inclined to think it was. Dr. Martin [1] and Dr. Billington [2] each relate a case in which the same result followed after small quantities of the drug—in the case of the former after gr. viij., and of the latter after six in twenty-four hours. Though these quantities are larger than mine, yet they must be considered small.

[1] MEDICAL RECORD, September 20, 1883.
[2] Ibid., March 6, 1886.

Again, Case I. was not anæmic; she was well in all other respects and presented the appearance of perfect health. Whether or not the case at the time of the first treatment, in 1883 (on account of the small quantity taken), illustrates the efficacy of the pot. permanganate, I think the second treatment, in 1886, shows a result due to manganes. binoxid. The condition of Case II., though suffering to some extent from anæmia, had been much improved under iron and cod-liver oil. The reason I am particular to mention the presence or absence of anæmia is, because I am inclined to abstain from using remedies to promote menstruation when the anæmic state exists.

Case III. presented no signs of anæmia, though one would be led to think, from her habits, that she could be in no other condition. In fact, I considered her plethoric. This case corroborates Martin's experience with the drug in plethora, and also shows the necessity of persevering under what were, to me, discouraging circumstances, re-establishment of the menstrual molimen not having been effected until after five months of treatment.

In looking through the not very extensive literature of this subject, I noticed that with one or two exceptions the writers treat of the use of the remedy in amenorrhœa alone. Martin was the first to use it in menorrhagia and metrorrhagia as well. In his first communication (THE MEDICAL RECORD, September 29, 1883), he relates the cure of two cases of the former and one of the latter. In a paper read before the Chicago Medical Society, January 5, 1885, and reported in the New York *Medical Journal* for January 24th. of the same year, he reports two cases of metrorrhagia and menorrhagia cured, and four severe cases of the same in the practice of Dr. D. F. Bradley, of Chicago, which were greatly benefited by manganese, when iron, ergot, gallic acid, mineral acids, astringents, and hot-water injections failed completely. Dr. T. G. Thomas, in a letter to Dr. Billington, dated February 9, 1886, claims the same results from manganese in these conditions.

At this juncture the question as to the mode of action of manganese presents itself. Again, is there any particular form of the drug which alone is efficacious in the disorders of menstruation? The permanganate of potash is the most commonly used of all the forms, but there is abundant evidence that other combinations are effective. In Broadbent's case the chloride was used. Ringer and Murrell and Thomas have had equally good results from manganese binoxid. as from the permanganate salt, and recently Martin has found the oleate a successful remedy when applied by inunction. Dr. R. Bartholow, in the *Medical News*, November 22, 1884, discusses this question and considers that the emmenagogue properties of potass. permanganate are due to the large quantity of oxygen it contains. The oxygen, according to him, is the chief factor. I cannot believe this to be so, since other forms of manganese have been at least as nearly effective as the permanganate. Cases I. and II. that I present, in which I used the binoxide as well as the permanganate, show this. I am inclined to think, however, that less of the permanganate is required to produce an emmenagogue effect.

Martin is the only one, as far as I know, who has attempted a theory of the mode of action. He says: "From my observations I have been led to consider manganese, in any form, a direct stimulant to the uterus and its appendages. It may exert its influence by acting as a direct vaso-motor nerve-stimulant to the vascular system of the parts, and in consequence of the improved circulation directly increase the tone and nutrition of the organs, or it may exert its whole force through stimulation of the sexual nerve-ganglia, or even, possibly, of the sexual *nerve-centres*, thereby bringing the organs to their normal state of action. At any rate, its action is prompt and direct. In bringing the uterus and appendages to a normal of menstrual tonicity, when lack of tone

is dependent on some previous depression of innervation, manganese has certainly no equal." [1] If I properly understand what is here meant, manganese should be placed in the category of those remedies called excito-motor, having the power to increase arterial tension, and with special action on the uterus.

It would resemble ergot, then, very closely in its action. Clinically, this seems so, since it is followed by equally good results in the opposite conditions, amenorrhœa and menorrhagia. It is not placed among the excito-motors by therapeutists however. Bartholow says that in small doses it diminishes the pulse-rate, lowers the action of the heart, and lessens blood-pressure. Heretofore it was always considered to be allied to such drugs as iron, zinc, nickel, etc., which tend to promote constructive metamorphosis, remedies decidedly slow in their action. As a regulator of the menses, it may be that a new property has been discovered in manganese. Further observations, however, are necessary before we are warranted in formulating a plausible theory as to its mode of action.

In speaking of the therapeutic action of this drug we are necessarily led to a consideration of the causes underlying the disorders of menstruation, and are admonished that the greatest care and intelligence should be exercised in selecting the cases in which remedies of this kind are to be used. I think you will agree with me that this is not always done; on the contrary, there are no complaints in which more unintelligent prescribing is prevalent than in the class of cases here referred to. There is no doubt that this is due to the fact that amenorrhœa and its opposite conditions are looked upon as diseases instead of mere symptoms. They are never primary in their origin, but are always dependent on unhealthy constitutional conditions or local organic disorders, either alone or combined. Trousseau says: "As long as these general troubles exist, we vainly try to recall the menses with drugs; the first condition of all is to re-establish equilibrium, and then the special excitant of the uterus becomes an important weight in the scale."

No doubt you are as much impressed with this statement as I, and may consider it unnecessary to quote it; but my memory is not so poor that I can forget how short a time ago it is since I came to recognize and understand its truth. The great danger in becoming too enthusiastic about new remedies is that a habit of superficial and one-sided observation is bred in us—therapeutics being advanced at the expense of pathology. Manganese will no doubt be found a very efficient remedy, but we must not fall into the error of believing it to be a specific. This indeed it is not, and few if any will be found to make such claim for it. I believe it is a drug which simply promotes constructive metamorphosis, acting like iron and its congeners, by supplying a natural and therefore necessary constituent to the blood. In addition to this it has, no doubt, some special action on the uterus, for how can we otherwise explain its effects in menorrhagia and metrorrhagia, where the promptness of its action is in marked contrast to the necessarily slow operation of general nerve and blood tonics?

In speaking of the treatment of amenorrhœa I want to particularly call your attention to some errors into which many have fallen. It is pretty generally believed, I think, that some peculiarly mysterious and deleterious influence is caused immediately and necessarily from the discontinuance of the menstrual flow. And again, it is thought by not a few that because the remedies used produce a flow of blood from the uterus, that menstruation is therefore established. To quote Trousseau again, where he speaks of the treatment of amenorrhœa: "A great many morbid states hold the function in check and simulate (so to speak) the part of pregnancy. How often a careless physician stumbles against such a contradiction. One of two things happens: either the emmenagogue succeeds or the morbid obstacle resists its action. Suppose the emmenagogue carries the day; it has forced the contradiction. Do you think your conquest legitimate? No. You have produced a uterine hemorrhage, but you have not re-established the menses."

. . . . . .

"The emmenagogue stimulants may cause fluxion of the womb, but they either cause uterine hemorrhages, which are not the menses, or if they restore the function legitimately, it is because the diathesis of the function (so to speak) pre-existed, and was only awaiting an auxiliary stimulus."

It is pretty generally believed now, that normal menstruation is always accompanied by ovulation. Suppose then, a depraved state of the blood or a condition of enervation exists which of necessity interferes to the extent of arresting ovulation, of what avail will our emmenagogue remedies be while this constitutional condition lasts? In anæmia, for instance, will we not do harm when we cause a uterine hemorrhage which can have no other effect than to increase the anæmia? Among the cases reported as having been successfully treated with manganese, I noticed many in which anæmia was considered the underlying cause. I say successfully treated, because they were so reported; but I am not altogether sure that the treatment was always successful. Very often there was nothing in the reports to show that the cases were observed for any time beyond that in which the menstrual flow was initiated. How are we to know, then, that the remedy caused anything but a temporary uterine hemorrhage, which, if an anæmic state obtained, rendered the patient's condition worse than before? In such a condition of things we are forcibly reminded of the good old times when resort to the lancet was so common in fevers. Instead of pyrexia being reduced by the venesection it was increased by the loss of blood; this cause of fever, however, being little understood or wholly ignored, phlebotomy was again utilized, to the destruction of the patient.

According to Ringer and Murrell, manganese is contra-indicated in cases of acute congestion and in general conditions of sthenic reaction. They also assert that abortion is not liable to result from ordinary doses, should pregnancy be overlooked in any case. For my own part, such has been the powerful effect of the permanganate salt in particular, in my hands, that I would hesitate long before giving the drug unless perfectly sure of the absence of this condition.

[1] MEDICAL RECORD, September 29, 1883.

THE PREVALENCE OF INFANTICIDE IN CHINA.—There is a missionary society in existence, with its headquarters in France, the object of which is the rescue of Chinese infants abandoned to die by their parents. Colonel Cheng-Ki-Tong, in a recent work, "Les Chinois Peints par Eux-mêmes," denied that such a custom prevailed, and held up to ridicule the children belonging to this society, who, he said, were beguiled into giving their pennies for the rescue of infants who did not need rescue. Dr. D. J. Macgowan, however, in a paper in the *China Review*, shows that this custom is prevalent in many parts of that country, to such an extent, indeed, that numerous asylums have been erected by charitable individuals among the Chinese themselves for the reception and care of these neglected infants. Female children are the only ones drowned, boys being needed to conduct ancestral worship. The parents are usually very willing for a little cash to sell their girls instead of destroying them.

A LARGE FIBROLIPOMA.—Dr. W. Stankiewicz reports the case of a patient who had a tumor in the lumbar region, which had been growing for fourteen years and was of such a size that it hung down to the knees. Its base was forty-four inches in circumference. It was removed by operation, and weighed, after extirpation, forty pounds. —*Centralblatt für Chirurgie*, May 15, 1886.

THE DETAILS OF THE OPERATION FOR REMOVAL OF MAMMARY CANCER.

By ROBERT T. MORRIS, M.D.,

NEW YORK.

In a standard work on surgery, published as late as 1882, the article on amputation of the breast contains the following information: "The integuments should be brought together and maintained *in situ* by plaster or some other means, according to the inclination of the surgeon. Compresses of lint should be adjusted along the edges of the wound to maintain the flaps and subjacent tissues in close apposition, but openings must be left at either extremity of the wound for the escape of discharges." The reviser of the article adds a word in reference to extensive removal of malignant neoplasms, and says that "healing by first intention under these conditions is, of course, often out of the question, and such wounds heal slowly by granulation." To find information of this character in a modern work on surgery is certainly exasperating to the practical surgeon of to-day; and perhaps a concise description of the operation, and of a sort of wound treatment which belongs to this part of our century, will be of value to ambitious operators who have nothing but standard works to depend upon for instruction.

The greater number of surgeons will prefer, I suppose, to have a description which figures a case in private practice at the house of the patient.

For an operating-table the kitchen-table will answer very well. It is placed in a good light, covered with a quilt and a sheet of rubber, and is tipped a little to one side in order to allow irrigating fluids and blood to run off into a basin placed below.

A smaller table is moved to a point conveniently near, and is furnished with the following instruments and materials:

First: A roast-beef platter filled with 1 to 30 carbolic-acid solution, and holding a pair of vulsellum forceps for lifting the breast; half a dozen retractors of different shapes and sizes for managing slippery tissues; a pair of large and a pair of small curved scissors for trimming away fascia, etc.; a pair of straight scissors for cutting dressings, and a couple of scalpels. A pair of mouse-tooth forceps for lifting small portions of diseased tissue will be found very handy.

Second: A quart bowl filled with 1 to 30 carbolic-acid solution, and holding eight or ten artery forceps.

Third: A saucer partially filled with alcohol, and containing four metres of No. 8 catgut, and one of No. 5, prepared according to Kocher's method;[1] a metre of No. 7 chromic catgut; a large needle, and a large absorbable bone drainage-tube.

Fourth: A saucer of 1 to 30 carbolic-acid solution containing two strips of sheet lead, each of which is about four inches long and an inch wide, and perforated at intervals of half an inch with an awl; several half-split BB shot, and a few strands of silkworm-gut.

Fifth: A bottle of Lister's protective oiled silk in 1 to 30 carbolic-acid solution.

Sixth: A bottle of iodoform.

Seventh: A razor and nail-brush, and a cake of soap.

Somewhere near the table hangs a common fountain syringe, containing two or three quarts of warm 1 to 2,000 bichloride of mercury solution.

A wash-bowl of 1 to 1,000 bichloride of mercury solution contains four towels and two sponges.

The etherized patient is now brought in and placed upon the table. The diseased breast, the axilla of that side, and the skin for several inches about are soaped, shaved clean, and then scrubbed with the nail-brush and washed with 1 to 1,000 bichloride solution.

The operator and his assistants wash their hands in soap-suds and then in 1 to 1,000 bichloride solution, and they do it thoroughly, too, if they appreciate the fact that a life has been placed at their disposal.

One of the assistants takes the straight scissors from the dish of 1 to 30 carbolic-acid solution, cuts one-fourth of a yard of bichloride gauze from the roll in the clean tin-can, musses the gauze into a fluffy handful, and puts it on a towel. He then pulls out of its cover half a pound of bichloride cotton, taking care that it does not hit his clothes, and lays it on the towel with the gauze. The towel is rolled up about its contents and stowed away until after the operation.

A towel is taken out of the bowl of 1 to 1,000 bichloride solution, wrung dry, and laid across the patient's chest just below the breast (the patient lying on her side). A second prepared towel covers the shoulder and arm, while the third towel is spread on the rubber sheet between the patient and the surgeon, in such a way that instruments, sponges, catgut, and hands will touch no unprepared thing.

One assistant holds the arm of the affected side above the patient's head, and the arm is to be kept in this position until the operation is finished. The surgeon having determined the outlines of the cancerous mass in the breast, carries an incision through the skin around it, and so far away from its margins that healthy tissues only are cut into. The distance from the diseased part at which the surgeon must cut will vary very much with the case, and this point is to be learned by experience only. If a cancerous tumor could be colored deep blue, we should probably find the deep-blue color running through the mass to the axillary lymphatics, and thence to the deep lymphatics of the neck. The muscles and fascia in the vicinity would be colored less and less deeply, until the hue gradually faded out and became lost in the tissues at several centimetres' distance. To eradicate this great nest of microbes, and prevent their heaping up morbid accumulations of cells in the near future, a pretty extensive operation is always required. It will not do to follow the lines of incision which are usually given in the text-books, and the operation must be done without much regard for the beauty of the flaps or the graceful curve of the line of incision. It is well, however, to make the first cut on the lower side of the tumor, so that blood from the higher incision will not obscure the field. A few rapidly made strokes with the scalpel now divide the subcutaneous fatty tissue, and then a pause is made in order to pick up and ligate bleeding vessels with No. 8 catgut. The breast is seized with vulsellum forceps by an assistant, and traction is made while the surgeon divides the fascia of the great pectoral muscle, and shells out the cancerous mass with its surrounding layers of fat. The fountain syringe is to be used at frequent intervals, until the whole operation has been completed. And the bichloride solution is thrown not only over the surface of the wound, but also over the skin in the vicinity.

The next step in the operation is to clear out the axillary lymphatic glands and vessels and the loose axillary fat and connective tissue. It makes little difference whether these tissues are badly diseased, or whether they show no sign of being implicated, they are to be cleanly removed at any rate. The incision for giving free entrance into the axillary region should extend from the wound already made, up along the inferior margin of the great pectoral muscle as far as to its point of insertion into the humerus. It is a pretty good plan to dissect directly down to the axillary vein when this has been done, because the vein is a first-class landmark and there will be less danger of cutting or tearing its coats. If this enormous vein should be opened accidentally, it must be closed by ligation of the portion about the wound, and not by ligation of the vessel in its whole circumference. It would seem as though the cephalic vein ought to be able to carry the return flow of blood from the arm, but a sufficient number of cases of gangrene of the arm following injury to the axillary vein have given

[1] The unprepared catgut is put into oil of juniper for forty-eight hours, and is then transferred to a bottle of commercial alcohol, in which it remains until wanted for use.

serious testimony, and we must keep a sharp eye on that vessel.

Before removing tissues from the axilla, it is best to hunt out the internal cutaneous, intercosto-humeral, and three thoracic nerves, and to free them from surrounding tissues. If they are evidently involved in the disease they had better be removed, but the patient will want them if they are found to be worth keeping. There is not often danger of cutting the other important nerves at the bottom of the wound accidentally.

The axillary glands and fat, and the fascia which holds the lymphatic vessels, are removed thoroughly. In one of my cases, in which the glands were not very extensively involved, the little lymphatic vessels were hard and knotty, and a branch an inch or so in length could be held out horizontally by one end, just like a tiny twig of samphire.

The lymphatics which extend up to the clavicle can ordinarily be removed without the necessity of dividing the pectoral muscles transversely, but sometimes this will have to be done when the fascia looks suspicious.

While removing the lymphatics from under the clavicle, the operator should remember that a gland lies hidden, like a little mouse, between the opposed margins of the deltoid and major pectoral muscles, and that it will very likely creep out and go to eating again as soon as the surgeon has passed. An incision an inch in length, through the skin over the clavicle, will usually give room for removing this gland. The cervical glands and vessels which we meet on our way to the thoracic duct, or to the right lymphatic duct, can be brought out through the same opening. The last step in the operation will be to remove the fascia from the anterior surface of the major pectoral muscle, and from over the ribs and serrated muscle if it is necessary to do so. If muscular tissue is anywhere involved, it must come out, and the incision must go a long way from the diseased part into healthy muscle. Hemorrhage is stopped at every point by ligating the cut vessels with No. 8 catgut.

In closing the wound, the well which has been made in the axilla will disappear if the arm be let half way down. The air being pressed out of the hole, atmospheric pressure will keep the tissues in apposition in that region afterward.

One or two or three principal interrupted sutures of chromic catgut or of silkworm-gut are now inserted through the skin flaps. If the flaps are not heavy, the chromic gut can be tied in the ordinary way. If the flaps are going to make considerable tension on the sutures, the ends of the gut instead of being tied are passed through the holes in the strips of lead which have been waiting in the carbolic-acid solution; and then the split shot are pinched on to the gut ends, so that the strips of lead will take most of the tension from the sutures which are to close the wound.

Silkworm-gut is to be used in the place of the chromic gut only when there is danger that fourteen days' time will not give sufficiently long support for the flaps. Chromic catgut will not last much longer than two weeks, but silkworm-gut does not become absorbed at all.

The margins of the flaps are next united as far as possible with interrupted sutures of large catgut, and then a continuous suture of the smallest catgut makes the neatest possible approximation of the edges. If the margins of the wound can be everywhere approximated, so much the better; but this point is not to be considered during the performance of the operation, because a large exposed space left to heal by granulation is much preferable to a prettily closed wound which covers cancer-impregnated tissues. Primary union will occur in both of the wounds; and the granulating patch which is left in the one case can easily be covered with skin grafts or with a piece of skin transplanted from the arm, if it is too large to heal without aid. After all of the sutures have been inserted and an opening for the drainage-tube has been made, the bone-tube is put in in such a way that the axilla will be well drained. At the time when the tube is inserted the patient's arm must be held rather near her side, in order to relax the muscular walls of the axilla. If this is not done the air will probably rush into the wound cavity again, and then the surgeon has to fuss with the wound for several minutes in order to get the air out.

The temptation to give a final flushing with bichloride solution through the open-mouthed, inviting-looking drainage-tube is sometimes hard to control; and the feeling is somewhat akin to the one which the operator has when he longs to give the wound a final wipe with the cleaning-up towel. It is not safe to flush the wound through the drainage-tube, because a good deal of the bichloride solution may remain back in the wound. The reason why bichloride of mercury is an unpopular antiseptic in some sections of the country is because a little gumption is required in order to use it properly.

A harelip pin stuck through one edge of the emerging end of the drainage-tube will sometimes be required in order to keep it from slipping in beneath the skin. I made this suggestion at an operation not long ago, and one of the bystanders took a pin out of his pocket-case, swashed it around in the carbolic-acid solution a couple of times, and then handed it to me for use. Was that pin ready for use? Not at all! it needed a bath in pure carbolic acid for several minutes first.

After the drainage-tube and sutures are satisfactorily arranged, some iodoform should be rubbed all over the skin in the region of the wound, and any exposed tissues should be well sprinkled with it.

A piece of Lister protective, just large enough to cover the sutures and the exposed tissues, is next taken out of its bottle of antiseptic solution and spread evenly in place, a hole being torn in it opposite the drainage-tube opening.

The bichloride gauze is taken out of the towel and placed over and around the protective; and the bichloride cotton covers everything beneath it. A strip of muslin eighteen inches wide, with a hole for the forearm of the wounded side, is now passed around the patient's chest and pinned snugly in place, so that the dressings will not slip and so that the arm is kept perfectly at rest. No particular after-treatment will be necessary until two or three weeks have passed; and if no space has been left to heal by granulation, the wound will be entirely well at the end of that time.

The patient can get out of bed as soon as she pleases after forty-eight hours have passed, and I seldom have to restrict the diet after that period of time.

The dressings are not to be changed until two or three weeks have passed, but if serum runs through the cotton, the bedclothes must be turned down so that drying can go on quickly.

The most difficult thing which the surgeon has to do in an operation of the sort above described is to give close attention to untrained assistants, in order to be sure that they violate no antiseptic rule. Without intending to do so, an assistant who is absorbed in the operation may lay a sponge or an instrument on the bare table or on a chair.

When, at the end of two or three weeks, the dressings are removed, it will be found that primary union has occurred, and that there is no pus in the dressings. I believe that there is almost never excuse for suppuration on the ground that the patient is too old or too young, or too sick or too robust, or too fat or too lean, or too rich or too poor, or too anything else that one can think of.

To suppose that suppuration, or septicæmia, or pyæmia, or erysipelas, or tetanus are liable to result from a large wound is nonsense, unless the operator happen to belong to one of the following groups:

1. Men who became successful surgeons in earlier times with old methods, but who are now too far advanced in years to take up the newer and better methods of to-day, and who delude themselves with the notion

that the details of an antiseptic operation resemble the "walking and the talking of the prestidigitator."

2. Men who have had no opportunity to learn scientific antiseptic methods of work.

3. Men who cannot learn scientific antiseptic methods of work.

As regards the probability of recurrence of the disease after removal of mammary cancer, it is extremely difficult to make a prognosis in any given case. Statistics are really worthless on this point, because authors are not in the habit of stating the exact extent to which their operations were carried; and the painstaking sort of work which we now do is of quite a recent date. If it is possible to remove tuberculous tissues completely in caries of the knee-joint, it seems as though we ought to be able to remove cancerous tissue completely in some cases of this disease.

We know that in the majority of instances the blood is infected, and that the disease will break out again at an early date.

I find that physicians living at a distance from the great medical centres are, as a rule, opposed to operation in cases of cancer. They say that the patient must endure the suffering of an operation without gaining very much by it. Here there is a great field for reform work, and so soon as physicians and patients awake to a full appreciation of the advantages given by a strictly antiseptic operation they will not hesitate about a decision in favor of the removal of cancerous neoplasms. The operation, when done according to methods which are fully up to the times, and on operable cases, will cause the patients no actual suffering; and the intervals of freedom from the disease which are thus given will be delightful periods for the poor victims.

I have no patients who are more grateful than my cancer patients, although to all of them I have said, "your disease will undoubtedly return."

SOME IMPROVED FORMS OF BURNERS FOR THE GALVANO-CAUSTIC TREATMENT OF NASAL AND POST-NASAL HYPERTROPHIES.

By FRANK B. EATON, M.D.,

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE MEDICAL DEPARTMENT OF WILLAMETTE UNIVERSITY, PORTLAND, ORE.

If we compare the surgical methods of treatment of nasal and post-nasal diseases in vogue in Europe with those employed by our own surgeons, we are struck with the fact that the latter are, in spite of their advanced position in other fields, rather in the rear in this, except, perhaps, in respect to one weapon—the cold snare.

A reference to the earlier contributions of such progressive workers as Baginsky,[1] Löwenberg,[2] Voltolini,[3] and Thudichum,[4] will show that another method of treatment—*the galvano-cautery*—has long been the more favored one in England and on the Continent. Thudichum, indeed (*loc. cit.*), employed the galvano-caustic snare for the removal of nasal polypi as long ago as 1864, and gradually the electrode has replaced the various cutting and tearing instruments among the majority of operators in the majority of cases. Issue may be taken with the above statement as to the backwardness of our surgeons in the treatment of nasal diseases. Let me not be misunderstood. In our great medical centres are surgeons as competent, advanced, and progressive in the treatment of nasal diseases as any abroad; but they have yet to produce treatises as comprehensive as that of Mackenzie, or manuals as practical as that of Woakes;[5] hence the average of information on these subjects among our surgeons at large, who, as a rule, read first the works and follow the methods of their countrymen, is less than that of foreign surgeons. In no way can I so well substantiate these assertions as by referring the reader to a posthumous paper of R. Schalle, of Hamburg, published in the "Archives of Otology" in 1882.[1] In this most practical and valuable series of observations were anticipated, by its author, before 1880, many of the surgical procedures in the nasal cavities, and especially those by galvano-cautery, with which the majority of our surgeons are only just becoming familiar. No doubt a prime factor in retarding the general employment of the galvano-cautery in this country, for the treatment of nasal troubles, has been that most ingenious and now familiar instrument—Jarvis' snare. In the skilled hands of its inventor it will accomplish, no doubt, all that can be accomplished by any form of cold snare; but I appeal to the experience of the majority of the surgeons who have used it whether it has not in the end disappointed their earlier expectations, particularly in cases of the smaller and sessile posterior hypertrophies of the turbinated bones. These the snare is "clever" enough to engage; but, alas! just when we are sure that the loop has begun to cut through the growth, it provokingly glides over the surface, slips off, and the wearied patient must submit to a renewed attempt. This not infrequently happens, too, with the larger hypertrophies.

I have succeeded in introducing needles through posterior hypertrophies, and thus snaring them off, by means of an ingenious little needle-director which Dr. Jarvis showed me, invented by himself, and which he kindly permitted me to have duplicated and put upon W. F. Ford's catalogue. Dr. Jarvis informed me, however, that from constant practice he is sufficiently expert to introduce needles through posterior hypertrophies unaided by any special instrument. Those who have attempted to transfix such growths will nevertheless, I think, agree with me that, even aided by his needle-director, this is generally extremely difficult to accomplish, especially in cases of small hypertrophies, and it is almost impossible to transfix any posterior hypertrophy at its base. Again, the removal of anterior hypertrophies by the snare has always been extremely painful, nor does cocaine avail to prevent it, and in this tedious mode of operation the suffering entailed is often bitterly referred to by the patient. It is not without reason, then, that the galvano-cautery has been preferred before the snare in many cases by surgeons long experienced in the treatment of diseases of the nasal cavities. There are, of course, cases in which the snare would be preferred, as, for instance, in marked hypertrophy of the pharyngeal tonsil and in most cases of polypi. But even in these cases the cautery finds its place, and should follow the snare in the after-treatment. It is clear that in some cases cutting-forceps, such as Dr. Löwenberg's post-nasal forceps, have advantages over all other instruments; but I maintain, in favor of the galvano-cautery, its superiority in respect to adaptability to the greatest variety of circumstances, as, for example, to adults or children, to use anteriorly or by way of the mouth, etc.

As to the comparative value of chemical cauterization, the testimony against this last method is so universally unfavorable that I need not consider it here. With all these objections in view to other methods, what proportion of our surgeons commonly make use of the galvano-cautery in diseases of the nares? Comparatively few; and it is the purpose of this article to account for this, and to describe a form of battery and improved burners which are within the reach of all surgeons, and useful in the hands of those of average skill.

In the first place, until lately the high price of the cautery batteries in the market, the difficulty of managing and keeping them in order, and the fact that they were unnecessarily large and powerful for use in nasal

[1] Volkmann's, Samuel, Klin. Vorträge, 1879, No. 160.
[2] L'Union Medical, 1881, No. 104.
[3] Die Rhinoscopie und Pharyngoscopie, 2te Auflage. Breslau, 1879.
[4] On Polypus and Other Morbid Growths in the Nose, etc., their Radical Treatment by the Galvano-cautery, and their Relation to Asthma, The Lancet, April 17, 1880.
[5] Post-nasal Catarrh and Diseases of the Nose causing Deafness. By Edward Woakes, M.D. P. Blakiston & Co., 1884.

[1] On Aural and Naso-pharyngeal Diseases, and some of their Methods of Treatment, a posthumous paper, by R. Schalle, Hamburg, Archives of Otology, vol. xi., p. 113.

diseases, has deterred many surgeons from purchasing them.

Many physicians possess but a limited knowledge of electric science; hence they imagine that it requires a large, powerful, and expensive battery to furnish a current sufficient to heat the nasal electrodes. This is an error. The size and number of plates are in proportion to the amount of platinum that must be rendered incandescent. A large electrode-écraseur, such as used, for instance, for amputating the cervix uteri, requires a powerful current, such as furnished by a number of plates of considerable size, and a correspondingly large amount of exciting fluid, these involving an expensive apparatus.

But the burners used in the nares are practically very small knives, or small wire snares, and a current sufficient to render them incandescent is readily derived from one large cell of two elements arranged for quantity. The battery which above all is suited for this purpose, as to convenience, efficiency, and economy, is that devised by Dr. Carl Seiler, of Philadelphia.[1] The one shown in the cut is that especially designed for use with nasal burners. It is thus described by Dr. Seiler:[2]

"This battery consists of a series of carbon and zinc plates connected for quantity, . . . mounted on a plate which is fastened near the top of the box, so that they hang from the interior of the box. Immediately beneath the plates is a hard-rubber cell containing the exciting fluid, mounted upon a platform which can be raised or lowered by means of a treadle projecting from the box. This treadle is jointed, so that by folding it up it can be placed inside of the box out of view and harm's way. When it is depressed, the platform with the cell rises, and the system of plates is immersed in the exciting fluid, whereby the current is established. The height to which the cell is raised determines the amount of current, and consequently the amount of heat in the platinum loop. . . . As the treadle is actuated by the foot of the operator,[3] it will be seen that he can control the amount of current during the operation without the aid of his hands or of an assistant, as is necessary in the case of the ordinary galvano-cautery batteries, and can regulate the temperature of the knife to a nicety. The rubber cell being large, contains a large amount of fluid, and as the plates are entirely out of the fluid when the platform is lowered, the liquid is not readily exhausted, so that the necessity of refilling the cell with fresh fluid does not occur very often; a point the advantage of which will be apparent to everyone who has ever used a battery with small cups which require refilling after each operation."

It would be difficult to say too much in praise of this battery, and of its advantages to the surgeon.

It cannot, however, be said that Dr. Seiler has been equally happy with the handle and burners which he has devised to accompany his battery;[4] nor are those of Dr. Shurley[5] free from serious imperfections. Their handles, in common with all those furnished by our instrument-makers, are far too large and clumsy for delicate manipulation. The nasal mucous membrane being one of the most sensitive of the body, every untoward movement of the surgeon's hand while directing instruments in the anterior nares inflicts considerable pain, and it is needless to state to those who have used the above handles (Dr. Seiler's is five and three-fourths inches long and weighs two and one-fourth ounces) that not only is unintentional pain often inflicted, but anything approaching delicate manipulation or complete control of the electrode is impossible; for these handles must, from their size and weight, be grasped; being too large and heavy to be lightly held by the fingers. As for the nasal electrodes or burners introduced by the above well-known surgeons, there is one singular defect common to all, and that is that their greater diameter (transverse), including that of the platinum knife, when fixed in the handle, is horizontal instead of being, as it should, vertical. The transverse diameter of the anterior nares being almost obliterated in many cases of hypertrophic catarrh, the disadvantage of this is obvious.

Another defect is that most of the burners employed in the anterior nares to destroy hypertrophied tissue of the turbinated bones are used as *knives*, to make incisions. Now the object of all cauterizations of these parts is to form *broad* cicatrices, which is to be accomplished rather by *searing* than by incising; and, besides, a seared wound does not bleed as does an incised one. Again, none of the electrodes now made, to my knowledge, are suited to destroy posterior hypertrophies of the turbinated bones, while those devised by D. Lincoln[1] for use in the post-nasal space are too long and bulky, and involve the use of a large handle.

Dr. Shurley's burner, for use in the same region, has not, I think, a sufficient incandescent surface, though it is very useful. Many of the electrodes now in use are covered with asbestos, vulcanized fibre, or other non-conducting material, which interferes with attempts to bend them to any great extent. The object of such coverings is to insulate the wires of the electrodes, and to protect the parts not to be burned. A suitable battery renders such coverings entirely unnecessary, as the platinum is quickly rendered incandescent, and the cauterization is accomplished before the copper wires leading to the platinum have time to become heated. Besides, these coverings increase the diameter of the electrode and obstruct the operator's view.

In the electrodes I have devised and tested in a great variety of pathological conditions of the nasal cavities, I have endeavored to do away, one by one, with the objectionable features above enumerated, and to adapt them to reach those parts of the nares hitherto entirely, or only with difficulty, accessible to the cautery. First of all, I discarded the large and clumsy handle and the circuit-closer, substituting for the former a small, light handle in one piece with the electrode, and for the latter the closing of the circuit by the foot, after the manner of Dr. Seiler, using for this purpose a battery of my own construction, though I prefer the one described above of Dr. Seiler. Each electrode, as seen in the cuts, has its own handle, measuring one and three-fourth inch in length, permitting it to be held lightly between the thumb and one, two, or three fingers. Their average weight is but one drachm and a half. The conducting-cords are attached directly to the electrode. A set of these burners, as devised by me, comprises eight pieces, to which I have given appropriate names.

The *lateral burner* (that for the right naris is shown in Fig. 3–A), perhaps the most generally useful of all, is jointly the device of Dr. R. G. Rex (formerly of this city, now of San Francisco) and myself. Notwithstanding its resemblance to that introduced by Löwenberg,[2] it materially differs from his, and was made and used by me before either Dr. Rex or myself knew of the latter's existence. The essential point of difference is the position of the platinum relative to the vertical diameter of the electrode. In Löwenberg's burner, in order to bring the platinum in contact with the tissue to be burned, it is necessary to turn the instrument upon its axis, and thus the greater diameter becomes parallel to the horizontal diameter of the naris, which, as pointed out above, is a practical disadvantage. The great advantage of my lateral burner is that, owing to the platinum arising from the distal end of the lower copper wire in a gradual

[1] Made by Otto Flemming, 729 Arch Street, Philadelphia, Pa.

[2] Handbook of the Diagnosis and Treatment of Diseases of the Throat, Nose, and Naso-Pharynx. By Carl Seiler, M.D., etc. Second edition, p. 234.

[3] In order to shorten the conducting cords and thus relieve my burners from the weight of long cords extending from the battery placed upon the floor, I have directed Mr. Flemming to connect the treadle by cords with another to be used by the foot, the battery being placed, when in use, upon a table close to the patient. This is the arrangement I use with my own battery.

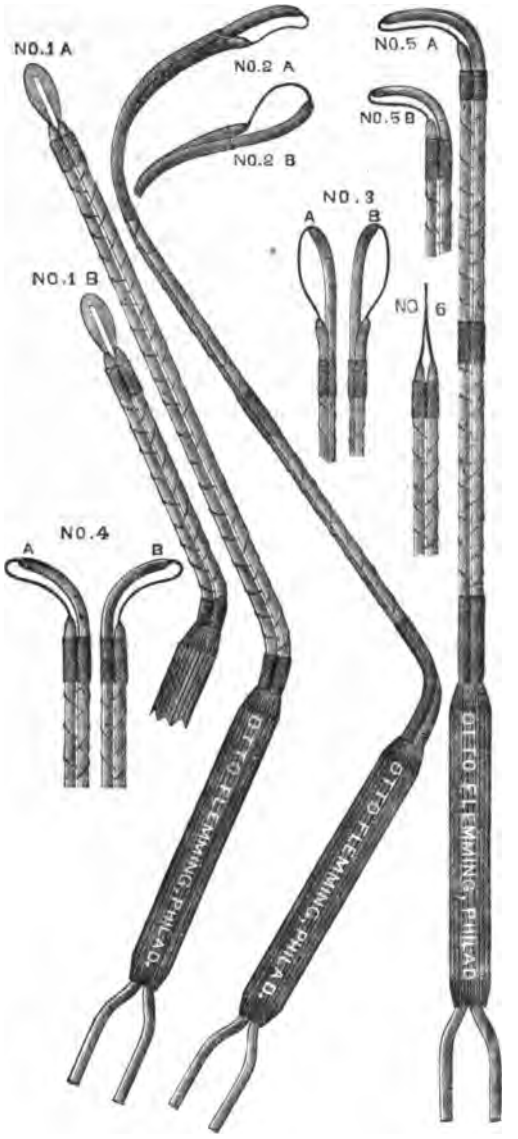
[4] Ibid., p. 232, and J. Reynders' catalogue, fifth edition, p. 130.

[5] St. Louis Medical and Surgical Journal, January 5, 1880, and J. Reynders' catalogue, fifth edition, p. 129.

[1] Naso-pharyngeal Polypi, by Dr. R. P. Lincoln, of New York, St. Louis Medical Journal, November, 1879, p. 461.

[2] Vide cut in Diseases of Throat and Nose. Morrell Mackenzie. Vol. ii., p. 274.

curve, the plane of which is at a right angle with the vertical diameter of the electrode, and the diameter of the copper wires being only one and one-fourth millimetre, it is possible to destroy with it erectile or other hypertrophic tissue that is in actual contact with the septum or nasal floor opposite without burning the latter. This advantage I have found greatest in cases of hypertrophy of the tissue of the middle turbinated bone, which is often in contact with the septum.



Dr. F. B. Eaton's Naso-Pharyngeal Cautery Electrodes: 1–A, long spatula-burner, for hypertrophy of turbinated bones; 1–B, short spatula-burner, for anterior hypertrophy of turbinated bones; 2–A, lateral S burner, for growths on post-nasal walls; 2–B, S burner, for growths on post-nasal roof; 3–A, lateral burner for right nostril, for hypertrophy of turbinated bones; 3–B, the same, for left nostril; 4–A, scythe-burner, for right nostril, for posterior hypertrophies of turbinated bones; 4–B, the same, for left nostril; 5–A, post-nasal scythe-burner, for growths in post-nasal space; 5–B, the same, of smaller size, for children; 6, pointed burner, for puncturing anterior hypertrophies.

The platinum of this and all the burners is No. 27 (English standard), which I have found to be of sufficient thickness to produce a searing effect, and to burn deeply.[1] Owing to the above-described curved shape of the platinum, it is possible, in some tolerant cases, by keeping it at a white temperature, and beginning the incision at the posterior end of the inferior turbinated bone and drawing it steadily forward, always aglow, to destroy the hypertrophied tissue upon the latter, throughout its length, in one sitting, for the curved platinum does not catch as long as it is kept glowing and steadily moving.

In Figs. 4–A, and 4–B, is shown my *scythe-burner* for the destruction of posterior hypertrophies of the *right* middle and inferior turbinated bones. A similar one, with the "scythe" turned to the right, is used in the left naris. It is not unlike the one described by Schalle,[1] who gave it its name; but the arrangement of the platinum is different, being carried on to form the end of the hook or "scythe," and being used for a different purpose. It is admirably adapted for destroying posterior hypertrophies of the turbinated bones, and with it I have successfully accomplished this, even when circumstances made it impossible to direct the burner by posterior rhinoscopy. In such cases I introduce it, scythe upward, from in front into the post-nasal space, then bring the handle to a vertical position (the scythe being at a right angle to the handle), draw the instrument forward directly in the line of the turbinated bone until the scythe hooks itself upon the hypertrophy (which, as in the case of the snare, is the only obstruction which checks its progress), and make the platinum glow. Of course it is better to direct the burner, especially in posterior hypertrophies of the middle turbinated bone, by the rhinoscope.

This burner I have also often used to produce absorption of large enchondromas of the septum, as the point of the scythe, when glowing, can be sunk deeply into the cartilaginous growth on its posterior, as well as its upper and outer surfaces. In some cases of polypi of the middle turbinated bone, which cannot be engaged in the snare, this scythe-burner can be passed behind the pedicle and the latter burned through.[2]

The *long* and *short spatula-burners* (Figs. 1–A and 1–B) differ only slightly from those generally used, as far as the shape of the platinum is concerned. They have the same general features, as to handle and proportions, with my other burners; but I have directed Mr. Flemming to bend the platinum longitudinally into a "furrow" shape. They are used to enlarge the wound made by the lateral burner, which is V-shaped, by passing them, when glowing, along its track. They are also useful for burning the anterior surface of the middle turbinated bone. For growths in the post-nasal space I use two forms of burners. One of these is an invention of my own, which I call the *S burner*[3] (Figs. 2–A and 2–B). The original feature of this burner, besides the handle, is the position of the platinum—a piece of curved No. 27 platinum-wire being placed upon the upper side, instead of the usual distal spatula-knife. The advantage of the wire over the knife I find to be not only that the wire is more easily brought in contact with the different parts of the roof of the pharynx, and, when glowing, passes readily through inequalities; but, being blunt, it does not catch in and lacerate the mucous membrane in its often unavoidable contact with it during its introduction, as is often the case with Dr. Seiler's electrode. It is so made as to be readily bent to any desired shape. Mr. Flemming also makes modified forms of this burner (not illustrated), with the platinum-wire turned to the right and left, after the manner of the lateral burner, which are very convenient for burning the hypertrophied salpingo-pharyngeal folds leading from the orifices of the Eustachian tubes to the fauces in many cases of postnasal catarrh.

In Figs. 5–A and 5–B, is shown Schalle's *long post-nasal scythe-burner*, to be introduced by way of the anterior nares. It is the same form of instrument described as follows by him, except that I employ copper wires of less thickness and prefer a smaller scythe for children. Schalle describes it thus:

"The latter (scythe-burners) consist of copper wires 2 mm. thick, one of which bends above in scythe form, continues transversely for 12 or 14 mm., according to circumstances, and then, being bent again, runs again in the direction of its first part; but at a distance of 2 mm. its course is continued in a platinum wire to which it is soldered, so as to return to its point of origin, where it

[1] Hemorrhage from erectile tissue is avoided by lifting the burner from the wound while incandescent, and by using cocaine beforehand.

[1] Archives of Otology, xi., p. 135.

[2] An interesting case of this kind is narrated by Schalle, Archives of Otology, vol. xi., p. 147.

[3] A term applied by German surgeons to the common double-curved post-pharyngeal electrode.

joins the second returning copper wire. When the instrument is applied behind the proliferation (pharyngeal tonsil), the platinum wire closely hugs the upper pharyngeal wall, and when rendered white-hot and drawn toward the nasal septum, it destroys the proliferation."[1] Concerning its use in the case of children, he says further: . . . "operation under digital direction is always preferable in children. In them I also introduce the scythe-burner through the nares, then bring it into its correct position by the finger of the other hand, introduced through the oral cavity, and make it glow. In using the scythe-burner, the action of which here is excellent, the point of the guiding-finger is protected from being burnt by the intervening space, so that we have the advantage of controlling the incandescent instrument by the palpating finger."[2]

In adult patients with quiet palate I prefer to use Jarvis' snare, with curved cannula from the mouth, in cases of hypertrophy of the pharyngeal tonsil where the growth is large enough to be engaged in the loop; but in sessile, small hypertrophies of this organ, I prefer, in adults, to use the above-described S burner. I have never yet experienced the disagreeable results produced by reflex irritation of the accessory nerve, following the use of burners in the post-nasal space referred to by Schalle,[3] though I have often freely burned hypertrophied tissue in all parts of this cavity; nor do I think this accident likely to follow cauterizations done under rhinoscopy, but only such blind, and I think unjustifiable, operations as performed by him, in some cases, unassisted by the mirror or palpating finger.[4] Fortunately, as is well known, the fauces are remarkably insensitive in many cases of serious post-nasal obstruction, and rhinoscopy is easy.

In conclusion, I would state that I have given due credit for all ideas and hints I have utilized in the construction of these burners. Schalle's burners, if indeed they were ever made for general use, I have never seen. The form and proportions of my burners have grown out of my own experience in treating chronic hypertrophic catarrh, most cases of which have come under my care complicated with acute and chronic catarrh of the middle ear, a form of aural disease which the moist climate of the Willamette Valley seems to render unusually common in Western Oregon.

In a future article I hope to give some useful hints upon the indications for the use of the galvano-cautery *in nasal* and post-nasal catarrh, complicated with aural disease, illustrated by appropriate cases.[5]

NOTE.—Since writing the above I have found it better to work with the battery placed upon the floor, instead of carrying out the plan of placing it upon a table. To obviate the weight and stiffness of the heavy conducting cord, I have directed Mr. Flemming to shorten it to thirty-five inches, and to continue it into two light cords to which the burner is attached. The dragging weight of the cord is avoided by simply supporting it by drooping it over the pipe of the condenser, or fixing by any device which may occur to the operator.

The *pointed burner* (No. 6) I devised to carry out the plan suggested by Dr. Henry Schweig (THE MEDICAL RECORD, vol. xxix., No. 26, p. 206), of puncturing anterior turbinated hypertrophies. This method I have tested and found effectual for destroying hypertrophies of the anterior third of the inferior turbinated bone. Naturally it is limited to these, as the point cannot be guided accurately farther back. The point is half an inch long, and is not represented of sufficient length in the cut.

PORTLAND, ORE.

THE new House of Commons only contains ten doctors.

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[1] Loc. cit., p. 135. [2] Ibid., p. 136. [3] Loc. cit., p. 137. [4] Loc. cit., p. 136.
[5] The above-described burners are all made by Mr. Otto Flemming, 729 Arch Street, Philadelphia.

Clinical Department.

THE EFFECT OF SEA-BATHING ON THE EAR.

DR. SEXTON'S AURAL CLINIC, NEW YORK EYE AND EAR INFIRMARY, reported by W. A. BARTLETT, M.D.

NUMEROUS patients come to the infirmary, during the out-door bathing season, with distressing pain and noises in the ear, usually of unaccountable origin until questioning about getting sea-water in their ears brings out the fact that they have been disporting themselves in the surf, swimming, or diving. Even then some are surprised or incredulous to learn that, in struggling in the boisterous waves, one may experience unheeded the dashing of a heavy breaker against the side of the head, coming with sufficient force to drive the irritating cold salt-water into the ear and bruise the drumhead by its impact, thus setting up inflammation, or to even rupture that delicate membrane outright. The contact of the briny fluid, which often holds in suspension quantities of sand and small marine shell, while lying in the outer ear against the drumhead, may also give rise to inflammatory trouble. But it is still more incomprehensible to the ordinary bather that the water, which sometimes enters the open mouth or nasal passages while he unguardedly exposes these back-door portals of the ear, so to speak, to an incoming wave, possesses sufficient momentum to force its way up the Eustachian tube to the middle ear. This is an accident to which he is also liable from strangulation while diving or playing in the water, and the ear-drum is much more liable to be seriously affected in this manner than when deluged by water from without.

Of seven acute cases, ranging in age from eleven to sixteen years, selected out of many recently treated at the infirmary, only one of them recalled any previous ear trouble. All of them were males. Women seldom disport themselves violently as bathers, but men and boys often behave most rudely, and frequently, from protracted sojourn in the water, come ashore much exhausted.

In four of these seven typical cases the ear had been injured by the entrance of water *via* the Eustachian tube, since it appeared that they had been strangled and had sniffed water up the nose, causing much coughing and sneezing. They had likewise experienced immediate discomfort in the ear.

In the other three cases the damage had been done by the entrance of water into the external auditory canal from without; and in one of these water may have entered from both directions.

Sometimes recovery takes place spontaneously at this stage, leaving slight or no trouble, but persons with nervous exhaustion, or run down from any cause, cannot always thus escape.

If the trouble, however, advances, as was the case in the patients above alluded to, following the uncomfortable feeling of "stuffiness" or "water in the ear" almost always described as being immediately experienced is more or less pain in the organ, and perhaps deafness; the latter, usually but slight, is generally disregarded when the pain is severe.

The urgency of the symptoms in these seven cases must have been very great, for most of them were obliged to leave off work sooner or later; three of them came for relief the day following the injury, two came the fourth day, one the fifth, and one the fourteenth day.

In five of the cases inflammation was almost entirely limited to the *attic of the tympanum and contiguous parts;* in these *there was no discharge from the ears*—whatever escape of secretions there was took place through the Eustachian tube to the throat. In these cases characteristic appearances of the membrana flaccida gave evidence of the seat of the trouble; it was inflamed—in some instances distended as well. Where the process extended further the adjacent canal-walls

were tumefied, or even the seat of an incipient dissecting tympano-mastoid process. In some, mere exudation showed itself as larger or smaller cysts on the membra vibrans. Pent-up secretions were the cause of greatly increased pain, and autophonia, and sometimes of a feeling of "numbness;" and as the periosteal inflammation extended both internally and externally, the severity, of course, proportionately increased.

Prompt surgical treatment was employed in three of the cases, giving vent to secretions in the attic, and assuring future drainage. Two of the attic cases drained spontaneously, and did well without operative treatment. In all of them rest was advised, and local dressings and constitutional treatment adopted as required. In two of the seven cases the atrium was the principal seat of disease; one of them began to discharge in thirty-six hours, the other in two weeks, spontaneously.

It is usually these attic cases that show such a strong tendency to take on severe symptoms and involve the mastoidea; but when drainage is early secured, with proper constitutional and local treatment, the more severe may generally be prevented. Thus two of the attic cases were cured in two days, one in three days, one in fourteen days, and one in twenty-six days. The atrium cases were cured in eight and thirty-nine days, respectively—the latter being complicated with other troubles.

Persons may nearly always escape the injury to which the ears are liable in bathing by the observance of a few simple precautions. They should not expose the face or ear to incoming waves, especially such as are just "breaking" at the height of the head—*i.e.*, they should be on their guard not to be caught unawares. In floating upon the back water is liable to trickle in the canal of the ear, and in diving it also enters easily. Such a result may be prevented by wearing non-absorbent cotton or sheep's wool in the opening of the ear.

On coming out of the bath no time should be lost in wiping out any water that may remain in the canal, and drying the parts; this may safely be done by rolling a small bunch of the fibres of absorbent cotton-wool on the end of a "parlor" match, from which the ignitable portion has been burned. The cotton should project well over the end of the stick to protect it, and form a brush resembling those made of camel's hair. This brush may, with care or after proper instruction, be carried by the bather himself down into the ear for an inch, or until felt impinging on the drumhead; the use of one or more will remove all moisture, and probably prevent any further injury liable to occur from the presence of such an irritating fluid as sea-water.

QUININE IN THE TREATMENT OF WHOOPING-COUGH.

Dr. Ernest M. Lyon, of Newark, N. J., referring to a recent notice of the use of quinine in pertussis, writes:

"I have used it extensively and successfully in my own practice, as follows: ℞. Quiniæ bisulph., ʒj.; elix. simplic. rub., U.S.P., ℥jss. M. Sig.—Teaspoonful to a child aged five years and upward. I give it every three or four hours until cinchonism ensues, and keep the patient continuously under its influence, my guide for its administration being the frequency and severity of the paroxysms. By this means I feel assured that I have succeeded in favorably influencing the course of the disease, and shortening its duration in a majority of cases. I use the bisulphate because it seems to me it is better borne by the stomach, and in solution for the more accurate division of the doses. My experience has been that children do not object very strongly to the taste after taking it a few days. After each dose I give a lump of sugar saturated with lemon-juice, and always upon an empty stomach. I kept three of my own children cinchonized almost continually for nearly two weeks without any bad effects."

Progress of Medical Science.

Rheumatic Hyperpyrexia.—The sudden supervention of hyperpyrexia in the course of an attack of acute rheumatism, associated as it is with delirium and other nervous symptoms, constitutes a most formidable complication and one that requires very prompt treatment in order to avert a fatal issue. The symptoms of such a condition, which was usually supposed by the older writers to be a sudden metastasis of the rheumatic inflammation from the joints to the brain, are summarized by Dr. Henry Barnes in the *Edinburgh Medical Journal* for July, 1886, as follows: "There is great thirst, with a dry brown tongue; anxiety, restlessness, and insomnia; a dry burning skin, or more frequently profuse perspiration; often a miliary rash, the vesicles resting on an injected base, giving the skin a mottled appearance, sometimes mistaken for the rash of typhus; the joint pains may persist, or there may be a sudden cessation of them; there is acute delirium, followed by stupor, coma, and sometimes by convulsions. The temperature may rise from 104° to 110° or 112° in a few hours. The general condition of the patient resembles one suffering from typhus. Cardiac complications may be present or absent, but if present, are usually slight in character. As a rule, the degree of pyrexia in rheumatic fever bears some proportion to the number of joints affected and to the intensity of inflammation. In ordinary cases the temperature runs up to 102°, or even higher, on the first day, but there is no typical range. Evening exacerbations may bring it up to 103.5° or 104°. There are sometimes periods of intermission. The onset of complications is usually attended by a rise in the temperature, but this is never great unless the case turns out to be one of hyperpyrexia with delirium. The onset of grave symptoms is usually sudden. Dr. Wilson Fox collected twenty-one instances in which the temperature rose suddenly from 102° or 105° to 109°, 110°, and 111°, and where the duration from the date of the rise of temperature to death was in one case only two hours (103.5° to 109°); in another, four hours and a half (104.8° to 109°); in another, seven hours (105° to 110°); and in a fourth, eight hours (102.2° to 109.5°). In eleven cases the period varied from nine to sixteen hours. The symptoms may come on at any period of the disease, early in the case, when the articular inflammation is at its height, or when convalescence is established. The post-mortem appearances are similar to those found in typhus and other forms of blood-poisoning. There are no marked visceral lesions; there is rapid decomposition of the body; dark fluid blood; staining of the lining membrane of heart and large vessels; hypostatic congestion of lungs; a large soft spleen; granular degeneration of heart and voluntary muscles." Dr. Barnes relates the history of a case of this nature in which the good effects of prompt treatment are well illustrated. The patient was a girl, aged twenty, who was suffering from rheumatism involving a number of joints. The case progressed slowly, without anything worthy of special note, until the ninth day, when the temperature suddenly began to rise. As soon as it reached 106°, wet packing was commenced by means of a sheet wrung out of cold water. As the temperature did not fall rapidly, ice was added to the water, and lumps of ice were rubbed on the outside of the sheet. This had the effect of reducing the temperature within an hour to 99°. During the process of packing the patient became more conscious, and seemed to enjoy the cold pack very much. Toward the end, after nearly four hours in the pack, she felt rather uncomfortable and chilly. The temperature subsequently did not rise above 101.3°, and, with slight interruptions, the case progressed favorably, and the patient made a good recovery. As a practical result of his experience and studies, the author urges that in all cases of acute rheumatism, as soon as there is any indication of nervous

symptoms, and particularly in patients of a high degree of nervous susceptibility, a careful watch should be kept on the temperature, and it should be taken at frequent intervals. As soon as it shows a tendency to rise to the hyperpyrexia range, preparations should be made for the external application of cold. The dangerous symptoms may be sudden in their onset, and drug-treatment seems to fail to arrest them. The question as to what point the thermometer should reach before cold is applied is an important one, and the general condition of the patient will also have to be considered before coming to a decision; but in general Dr. Barnes recommends that it should not be allowed to rise above 105°, as the chances of success appear to be greater the earlier the cold-bath treatment is commenced. Of all means of applying cold, the graduated bath gradually cooled from 90° to 70° is the best, but as this is not always available, the cold pack, ice-bags, or cold affusion may be tried. Frequent testing of the patient's temperature is necessary during the process, and as soon as the reduction of temperature to 100° or 99° is effected, the treatment should be suspended, the patient should be placed in warm blankets, or otherwise dangerous symptoms of collapse may supervene.

The Use of Esmarch's Bandage in the Production of Anæsthesia.—M. Chandelux recommends the previous application of Esmarch's bandage when it is desired to produce local anæsthesia by means of the ether spray. He was led to make use of this procedure by the observations of M. Horand in 1867, who found that the difficulty of anæsthetizing a part bore a direct relation to its vascularity. The author claims the following advantages for his method: 1, anæsthesia is produced in from twenty to forty seconds, while by the ordinary method two minutes or more are required; 2, after the spray is discontinued the anæsthesia remains for about three minutes, since the parts are not warmed by the blood-current; 3, the operation—for example, the removal of an in-growing nail—is greatly facilitated by the absence of hemorrhage.—*Bulletin Général de Thérapeutique*, June 15, 1886.

Cure of a Lingual Ulcer by Galvanism.—Dr. Meyer has employed the galvanic current with success in the treatment of a very painful ulcer of the tongue which had existed nine years. The current employed was of sufficient strength to be felt without causing any pain. The positive pole was held in the hand while the negative pole was applied for thirty seconds to the most painful points. The pain was quieted for several hours after the first sitting. The treatment occupied about eighteen months, with two intervals of six weeks each. The total number of *séances* was one hundred and ninety. A perfect cure was reported to have been obtained.—*Journal de Médecine de Bruxelles*, June, 1886.

Hemi-rheumatism.—Dr. Casalis has recorded the results of the examination of a large number of cases of chronic rheumatism, and states that in a large proportion of them the articular manifestations were localized on one side of the body (*Journal de Médecine et de Chirurgie Pratiques*, June, 1886). This predilection for one side was so marked that he considered it to constitute a special variety of the disease, which he called hemi-rheumatism. These facts, he remarked, would seem to lend weight to the theory which has been suggested, that the central nervous system plays an important part in the production of chronic rheumatism.

Contusion of the Lung.—Dr. T. Piéchaud relates the following case: A man, about thirty years of age, who was driving a cart-load of pigs, came into violent collision with another vehicle and was thrown from his seat on to the pavement, with one of the animals falling on his chest. He experienced intense pain at the moment; this continued, together with great oppression at the chest and profuse frothy expectoration of blood. A minute examination failed to detect fracture of the ribs. No emphysema was discovered. About the middle of the right lung, posteriorly, there existed a tract of absolute dulness to the extent of several centimetres, with complete absence of respiratory murmur, and a marked tubular breathing. Above and below this zone air entered the lung freely, with a slight amount of crepitant *râles*. It was evident this zone of dulness from which the air was excluded corresponded with contusion and rapid sanguineous infiltration of the parenchyma of the lung. The progress of this case was favorable. Three days after admission to the hospital there was entire absence of fever, the pulse was calm, respiration normal, panophysis greatly diminished, and shortly wholly ceased. The symptoms, course, and result here obtained, when compared with those of inflammation or of laceration of the lung, leave no doubt that the lung in this instance had been only severely bruised. The patient was fortunate enough to escape the complications which commonly follow injuries to the chest. The only therapeutic measures adopted consisted of rest, astringent beverages, and opiates. Recovery complete. —*Provincial Medical Journal*, June 1, 1886.

Poisoning from Sorrel.—A curious case of poisoning is reported in the *Hospital Gazette* of June 19, 1886, the chemical features of which possess especial interest from a medical jurist's point of view. The victim of the accident was a boy five years of age, who gathered and ate a quantity of sorrel growing in the vicinity of his father's house. Subsequently the symptoms to be expected from the action of the poison contained in the leaves set in, and, to quench the thirst from which he suffered, the little fellow swallowed a quantity of soapy water which chanced to be within his reach. Death speedily ensued and, post-mortem, the stomach was found to contain oxalic acid in considerable amount. The action of the alkali in the soap swallowed had resulted in the production of soluble oxalate, by absorption of which the fatal event had been precipitated.

Chromic Acid in Granular Lids.—M. Darier states (*Revue Clinique d'Oculistique*, May, 1886) that, observing the good effects of applications of chromic acid to granulations of the pharynx and neck of the uterus, he determined to try it in granular inflammation of the conjunctiva. He takes a brush dipped in an aqueous solution of chromic acid crystals, and after having wiped away the tears covering the palpebral conjunctiva, touches lightly the affected points, but only these. In this way he obtains a desquamation of the epithelium, but never has to fear a deep eschar. The pain following the application is only temporary. The applications may be repeated daily, but M. Darier prefers to make them at several days' interval. He uses the chromic acid five or six times during the course of treatment, making applications in the intervals of glycerole of sulphate of copper. The effect of the latter is, he says, greatly enhanced when it is employed in this manner. He used chromic acid with good effect in a number of cases of old trachoma which had resisted every other mode of treatment.

A Two-pound Child.—Dr. S. L. Post reports in *Daniel's Texas Medical Journal* for June, 1886, that he delivered a woman, twenty-three years of age, and the mother of three children, of a fœtus weighing only two pounds. There were no pulsations in the cord, which was cold and atrophied and wholly detached from the placenta. After diligent work the child was made to breathe, and it is now as well as any infant. The woman menstruated regularly during her entire period of gestation, and during the last four weeks flooded so profusely that she was unable to attend to her domestic affairs.

Disinfectant for the Mouth.—Thymol, 5 grs.; benzoic acid, 3 ss.; tincture eucalyptus, 3 iij.; water, Oj.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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RECENT CONTRIBUTIONS TO ELECTRO-PHYSIOLOGY.

IN the Lumleian lectures, recently delivered in London by Dr. Stone, several of the problems of electro-physiology were dealt with, and some decidedly radical views were expressed. We have not space to enter critically into an analysis of Dr. Stone's opinions, but it may be said that many of them will not be received without considerable opposition.

The lecturer first showed that the discovery by Professor Hughes that the telephone can be used for the estimation of electrical currents may be utilized in electro-physiological studies. He next took up the question of the electrical resistance of the human body. By using large lead electrodes wetted with salt water the resistance of the skin was almost abolished, and Dr. Stone then found that the resistance of the other tissues was only about one thousand ohms, a much smaller amount than has previously been given.

We do not see, however, that Dr. Stone's discovery or correction is practically of any great moment, since, in fact, the skin resistance must always be taken into account.

The learned lecturer, indeed, seems even to think that the skin is not one of the tissues of the body. His experiments upon the resistance of the body in disease, however, are very interesting.

In dropsy it was found that the resistance was diminished; in one instance, as Dr. Stone ascertained, even to one-half. In six cases of hemiplegia, with contracture, the resistance was much less on the paralyzed side of the body. Again, in impregnations of the tissues by various metals the electrical resistance was much altered; mercury had a decided influence in diminishing it, as also had copper, while the influence of lead was but slight. Further studies in this direction are much to be desired.

In the passage of electricity through the body chemical decompositions take place, and electricity is developed and stored. One of the most striking of Dr. Stone's experiments were in this line, showing that the human body may be made a kind of storage battery. For example: In a case of old-standing sciatica, with wasting of the leg, and in two of diabetes, it was found that by charging the body with a moderate strength of constant current for half an hour a considerable discharge took place from the body, which might last for several hours. The first and largest discharge that occurs after the body has been charged is probably to be accounted for as a phenomenon of self-induction; but the less marked though longer discharge is most probably due to electrolysis.

Dr. Stone is very sceptical as to the correctness of present views regarding electrotonus; but while he apparently shows that these views do not express the exact truth with regard to the relations of electricity to nerve-function, he does not substitute any very clear explanation of what these electrotonic phenomena depend upon. We are quite willing to be shown what is wrong, but it would also be pleasant to learn what is right. A fact, not entirely new, is stated with regard to induced currents, viz., that the resistance of the human tissues to them was much less than to the constant current (600 ohms to 1,160). Dr. Stone also says that he has been able to measure the strength of induced currents. "The most available instruments for this purpose," says Dr. Blackwell, "are Hartmann's unifilar dynamometer, which Dr. Stone employed, and Kohlrausch's combined meter-bridge and induction-coil. When the resistance in the circuit through the human body, the Kohlrausch apparatus being employed, is balanced by an equal resistance through the bridge in derivation, the telephone (substituting the galvanometer) becomes silent."

THE FUNCTIONS OF THE TONSILS.

DR. R. HINGSTON FOX, in the July *Journal of Anatomy and Physiology*, discusses the functions of the tonsils and advances some interesting ideas in regard to them which to many will also be novel. These adenoid glands belong to the digestive and not to the respiratory function, the air respired through the nose passes through the pharynx posterior to them, they, when the mouth is closed, resting against the tongue and shut off from the pharynx. They are not, the writer contends, to lubricate the fauces and aid in deglutition as has been claimed. From their structure, which is similar to the solitary agminated glands in the intestine, he reasons that their function is absorbent. He announces his belief that "the function of the tonsil is connected with the stream of saliva which is poured over it, without cessation, day and night," absorbing from the saliva in the intervals of meals certain of its constituents which would be otherwise wasted. The adenoid tissue of which the tonsils are composed may be regarded as the birthplace of leucocytes. The materials, according to this theory, which might be wasted by the stomach, are intercepted by these glands, and made to minister to the growth of white cells.

He closes his article with this explanation of the atrophy of the tonsils which takes place in middle and later life:

"Adenoid tissue everywhere is more largely developed in childhood, when not only nutrition but growth has to be provided for, than it is afterward. And there is nothing surprising in the fact that these nurseries of young leucocytes (permit the fancy), planted here as it were by the river side and drawing their sustenance from the nutrient stream, should dwindle in later life when the demand for white cells has become much less."

The writer does not discuss the effects, if there are any, which the removal of tonsils in childhood, a not infrequent surgical operation, might occasion.

THE CURE OF TRAUMATIC TETANUS.

In a recent newspaper account of a case of traumatic tetanus cured by morphine and stimulants, the physician in attendance was reported, we hope incorrectly, as saying that it was "the only case of cure of traumatic tetanus in the history of the world." This statement, if it was made, was of course an absurdly wild one; but it is nevertheless true that traumatic tetanus is a very serious affection, and genuine cures are of sufficient rarity to deserve being reported in medical journals.

In *The Lancet* of June 12, 1886, Mr. William T. Jackman reports briefly a case of tetanus which recovered under the influence of the new hypnotic, urethran, in conjunction with chloral hydrate. The patient presented well-marked symptoms of tetanus, resulting from a crushing of a finger between two cog-wheels. The trismus was complete and opisthotonus was well marked. Severe paroxysms of pain, greatly exaggerated at night, were complained of. Chloral hydrate in twenty-grain doses every three hours was ordered, but had no other effect than to relieve the paroxysms of pain somewhat during the day. As no abatement of the symptoms was apparent after ten days of this treatment, it was resolved to discontinue the chloral at night and to substitute urethran in four-grain doses every two hours from 6 P.M. to 6 A.M. The first night of this treatment showed a marked decrease in the severity of the symptoms, and from this time the patient made a gradual and uninterrupted progress toward recovery.

A case of traumatic tetanus, cured by large doses of whiskey, was reported in THE RECORD not long ago by Dr. Hobart Cheesman, of this city. But while, in the absence of other means, it would be proper to exhibit large amounts of stimulants, and the newspaper writer above referred to seems to have resorted largely to this agent, such a drug as urethran, if equally efficacious, would for many reasons be far preferable. In the case of Mr. Jackman the failure of the chloral hydrate to relieve the severe symptoms, and the noticeable improvement under the influence of urethran, would seem to point to the latter as likely to prove a very valuable drug in the treatment of tetanus, and would certainly warrant its further trial in this stubborn and dangerous disease.

LA PERLÈCHE; A NEW PARASITIC AFFECTION OF CHILDREN.

UNDER the above title, Dr. Justin Lemaistre, of Limoges (*Journ. de la Société de Méd. de Haute Vienne—Le Progr. Médical*) describes a peculiar skin affection very prevalent among the children in and about the city of Limoges, and probably in other provinces of France. Among 5,500 school-children examined, 312 were found affected, while in the village of Périgord over half had the disease. It is called by the peasants *perlèche*, because the sensation of dryness and smarting causes the patients to lick (*pourlécher*) their lips. It is also called *bridon*, because the commissures of the lips are cracked or excoriated so that they look as if bridled. It is at these points that the disease is chiefly located. The epithelium becomes blanched, macerated, and detached. Sometimes cracks are formed in the direction of the commissural fold. These may bleed and cause pain. The lesion recalls many of the objective appearances of certain mucous plaques. The disease is self limited, lasting only from fifteen days to a month as a rule; but it may reappear again and again, so that sometimes a child will suffer for a year. The disease is perfectly devoid of danger, and causes no constitutional symptoms. M. Lemaistre has clearly shown that it is contagious, and that the ordinary mode of contagion is by school-children drinking from the same cup.

Upon these cups, in the drinking-water, and upon the infected surface of the skin, M. Lemaistre discovered a micro-organism which he cultivated and called the *streptococcus plicatilis*. In the Pasteur flasks the organism develops with extraordinary rapidity. In examining the diseased skin microscopically, the microbes were found on the borders of the epithelial cells, which often became disintegrated and destroyed.

The microbe lives in stagnant water, wells, and springs, in the form of a micrococcus. When taken into buckets, pails, and unclean drinking vessels, it develops into little chains. In this form it is transferred to the lips, where it develops. The crucial experiment of testing whether this was actually the pathogenic organism of *perlèche*, by inoculating pure cultures was, unfortunately, not tried. So that Dr. Lemaistre's view that it is the cause of the disease does not amount to a demonstration. The *perlèche* is a disease of uncleanliness, and can easily be prevented. Its importance lies in the possibility of its being mistaken for syphilis, and in the annoyance and suffering it gives to children, who are not to blame that their parents and school officials are neglectful.

POISONS IN FOOD AND DRINK.

THE current number of *The Forum*, a periodical which has already taken the first rank in publications of its class, contains an article on "Poisons in Food and Drink" by Dr. Cyrus Edson. Dr. Edson has won some reputation for his energetic prosecution of adulterators, and though his work has seemed at times somewhat sensational, he has undoubtedly done good service in the cause of public health. His opinions on the subject of adulterations are very positive.

Beginning with water, he asserts that not one well in a hundred contains water fit to drink. Ice, too, is a source of danger. The idea that in freezing the water purifies itself is a mistake, and, consequently, the ice-supply needs as much looking after as does the water in which it is drunk. The dangers of milk are two-fold. It may be contaminated by a disease, such as tuberculosis, affecting the cow, or diluted with infected water; or it may be skimmed and rendered innutritious by simple attenuation.

Not a week passes, we are told, but seizures are made in our public markets of carcasses of animals that have died from disease. Diseases which cause suppuration affect meat most injuriously. When it becomes known that an epidemic is raging in a certain section, unprincipled dealers

buy up the stock and convert it into beef, mutton, or pork, for the benefit, mainly, of the Knights of Labor and their dependents.. Bob-veal, which is the meat of the calf under four weeks old, is innutritious and indigestible, yet it is not infrequently sent into the markets.

Everyone knows that candy is adulterated, but we are told that in making jellies the adulterator reaches the acme of his art. Most fruit-jellies sold to-day are a fraud, being composed of glucose, water, dried-apples, coloring and flavoring matter, and gelatine.

Canned meats and vegetables are, as a rule, safe, unless decomposition has taken place before the cans are closed. Sometimes, also, tinners make cans from tinplate which contains lead.

Coffee and tea are often adulterated, or "fixed," so as to deceive the customer into believing that the article is better than it really is. The dangers from poisons in food and drink are two-fold, that from accidental contamination and that from deliberate adulteration. To remedy the first, the public must be educated in the rudiments, at least, of hygiene; to correct the second, we need wise laws with proper methods for enforcing them.

News of the Week.

THE DEATH OF DR. ELLSWORTH ELIOT HUNT.—Dr. Ellsworth Eliot Hunt, son of Dr. Ezra M. Hunt, of Metuchen, N. J., died of phthisis, at Pensacola, Fla., August 17th, aged thirty-one years. Dr. Hunt was a profound student and brilliant scholar. At Princeton, where he received his academic education, he was the first and only pupil who won by competitive examination the Steinke prize of $1,500 for languages. Subsequently he secured the fellowship in experimental sciences. He graduated third in his class at the College of Physicians and Surgeons in 1878, served as interne in Roosevelt Hospital, after which he repaired to Vienna to complete his studies. He was but a year and a half in practice when he was seized with pulmonary hemorrhage and was forced to repair to Florida, never to return.

A WONDERFUL OPERATION.—We learn by an account in a recent issue of the *New York World* that another rare and wonderful operation has been performed with brilliant results. This time it was a very painful cancer, situated in the dangerous locality of the breast. The skilful surgeon at the hospital was willing, however, to take all risks to save the life of the patient. The incisions were carefully and judiciously made "in the direction of the fibres of the great pectoral muscle," the slightest deviation of the blade inviting death. The knife was carried "around the diseased mass in such a manner as to include *every part of it*, the lower incision being made first." The pectoral muscle was "thoroughly exposed by the removal of its fibrous envelope." "Strict antiseptic precautions" were observed, and, *mirabile dictu*, the wound "healed by first intention," without any increase in the temperature. All this shows what advances are constantly being made in our noble art by bold and skilful surgeons. We hope, however, that success will not make some of our operators too bold. Who will be the first one to tackle "a wen?"

THE LATE DR. FRANK H. HAMILTON.—At the meeting of the Chicago Medical Society, August 16, 1886, the following were unanimously adopted:

Whereas, This Society has learned, with deep regret, of the death of Dr. Frank Hastings Hamilton, of New York, and,

Whereas, In his death the United States has lost one of its most distinguished surgeons, one of its ablest teachers, one of the purest patriots, and in his private life, one of the most amiable men;

Therefore, Be it resolved by this Society that we hereby give public testimonial to the many virtues of the deceased, and that we tender his family the assurance of the profound sympathy of this Society with them in the hour of their affliction, and that an engrossed copy of these resolutions be furnished them, and a copy spread upon the records.

L. H. MONTGOMERY, M.D., *Secretary*.

NEW CARDIAC TONICS are now appearing with almost menstrual regularity; and it is to be hoped that a climacteric will soon be reached. One of the latest, if not finest, under the name of nitrosalicylate of bismuth, has received the favorable notice of Professor Wagner, who has used it in his clinical practice at Buda-Pesth. It has the advantage, we are told, of being rapid in its action, and never cumulative in its effect. Its only disadvantage is that its effects pass away rapidly when its use is discontinued, and that some patients manifest an idiosyncrasy with regard to it.

PELLETIERINE IN OCULAR PARALYSIS.—Dr. Galezowski is an ophthalmologist of Paris, the pronunciation of whose name produces a facial spasm, but who, despite his appellative defect, is frequently discovering very wonderful things. Lately he has obtained a curious and unlooked-for result in using pelletierine. Having observed that the muscles of the eye were contracted when pelletierine, or a decoction of pomegranate, was given as a vermifuge, he was led to try the action of the salt in paralysis of the muscles of the eye, supplied by the third and sixth pair of nerves. The results obtained were very satisfactory, paralysis of the branches of the nerves being either cured or much improved after three or six doses, even where, under previous treatment by other means for several months, no relief had been experienced.

THE TREATMENT OF ORCHITIS AND EPIDIDYMITIS found most successful by Mr. F. W. Loudes (*Lancet*) is to paint the affected part with a solution of nitrate of silver (3 ij. to ℥ j.), with rest in bed, and support to the inflamed organ. One application is generally enough.

INSUFFLATION OF IODOFORM AFTER TRACHEOTOMY.—Dr. G. Shirres found, in two cases (*Lancet*), that the insufflation of ten grains of iodoform every four hours prevents the development and extension of the membrane.

THE BLACK LIST.—The number of institutions in this country whose medical diplomas are not recognized by various State Boards of Examiners is quite large, although fortunately some are now defunct. Here is the latest list: American Eclectic College, Cincinnati; American Health College, Cincinnati; American University of Pennsylvania (Buchanan), Philadelphia; Beach Medical

Institute, Indianapolis; Bellevue Medical College of Massachusetts; College of Physicians and Surgeons, Buffalo, N. Y.; College of Physicians and Surgeons, Milwaukee; Eclectic Medical College of Philadelphia; Edinburgh University, Chicago and St. Louis; Excelsior Medical College, Boston; Hygeo-Therapeutic College, Bergen Heights, N. J.; Hygeo-Therapeutic College, New York City; Joplin Medical College, Joplin, Mo.; Livingston University, Haddonfield, N. J.; Medical Department of the American University of Boston, Boston; New England University of Arts and Sciences, Boston; New England University of Arts and Sciences, Manchester, N. H.; Penn Medical University, Philadelphia; Philadelphia University of Medicine and Surgery, Philadelphia; Physio-Eclectic Medical College, and Physio-Medical College, Cincinnati; St. Louis Eclectic Medical College, St. Louis; St. Louis Homœopathic Medical College, St. Louis; Curtis Physio-Medical Institute, Marion, Ind.; American Anthropological University of St. Louis; Medical Department of Drake University, Des Moines, Ia.; and King Eclectic Medical College, Des Moines, Ia.

THE FRENCH SURGICAL CONGRESS.—The Second Session of the Congress is to be held at Paris this year, from October 18th to 24th. The opening meeting will be held on Monday, October 18th, in the School of Medicine. Four sittings will be occupied with several questions, and at least three with various papers. Communications should be sent to Dr. Pozzi, 10 Place Vendome. The special questions for discussion are: (1) Nature, Pathogenesis, and Treatment of Tetanus; (2) Nephrotomy and Nephrectomy; (3) Orthopædic Resections; (4) Operative Intervention in Irreducible Traumatic Dislocations.

Reviews and Notices.

PSYCHIATRY: A CLINICAL TREATISE ON DISEASES OF THE FORE-BRAIN, BASED UPON A STUDY OF ITS STRUCTURE, FUNCTIONS, AND NUTRITION. By THEODOR MEYNERT, M.D. Translated, under authority of the Author, by B. SACHS, M.D. Part I. The Anatomy, Physiology and Chemistry of the Brain. 8vo, pp. 285. New York and London: G. P. Putnam's Sons. 1885.

THE first two-thirds of the book is devoted to a description of the anatomy of the brain and cord, the remainder to a discussion of its physiology, nutrition, and to certain fundamental points in psychology. There is finally an appendix on the mechanism of expression.

The first chapter contains a very brief description of the development of the brain, and an account of the arrangement of the lobes, fissures, and convolutions. This is essentially the same as that usually given by other writers, but one will find besides much information in comparative anatomy. In the next chapter there is a description of the basal ganglia, and remarks on the general architecture of the brain. The author describes the course of the various fibres and commissures of the brain, and illustrates them with drawings of his torn preparations. To one who had the torn brains before him, the descriptions given by Meynert would not seem difficult, although he is the opposite of a lucid writer, frequently turning aside to discuss or comment upon some point bearing more or less indirectly on his main subject.

The minute anatomy of the cortex is given at some length with the familiar illustration of the five layers, which has gone the rounds of text-books for years.

After this point it must be admitted that the anatomical part of the book is not only difficult to follow, but in the descriptions of the course of fibres and connections and functions of the nuclei of the basal parts of the brain, and of the pons and medulla, the author is not always in harmony with the latest views of other eminent anatomists. This portion is nevertheless instructive to those who already know something of the subject.

The colored cross-section of the spinal cord is, we confess, quite beyond our powers of understanding or criticism.

An extremely instructive and suggestive portion of Meynert's work is that upon the physiology or physio-psychology of the brain. His discussion here is, to be sure, not systematic, and he seems quite incapable of continuously coherent literary expression. Meynert endeavors to explain all psychical processes through the interaction and association of cells, fibres, and end-organs. Every nerve-cell has the property of *sensitiveness*, which is developed in the fore-brain into sensation. Mental processes are the results of the associated activities of these cells, which form a surface upon which impressions of the external world are received.

Meynert is an idealist, and affirms that physiology can teach nothing else. The ego or personality is the aggregate of our memories, and is founded upon and depends upon the structure of our cortex. The will is practically an unknown quantity, but it is not free. Meynert is necessarily a disbeliever in freedom of the will, or rather, with modern psychologists, he discards the term.

The author gives no place to instinct in man. Every act, even that of the sucking child, is a conscious or reflex one.

"The avoidance of the greater pain is the determining motive of all human actions," is another of Meynert's deductions. The feeling of happiness is the result of a mental condition in which there has been excited innumerable actively working concepts, and in which there is an unrestricted flow of associations and a free expansion and running over of nerve impulses.

The cerebral cortex has two tasks—one the innervation of processes of thought and movements, the other the innervation of the vaso-constrictor muscles. When thought is active, vascular innervation is lessened and hyperæmia results, and *vice versa*.

Meynert's psychological suggestions, as we have already said, are valuable and suggestive, but it must be confessed that his views are nearly all old, and that the whole subject has been much better dealt with by Wundt and the modern English school.

The author gives a very interesting account of the nutrition of the brain.

The translator's share in this work cannot be too highly commended. He has performed a very difficult and arduous task in a manner beyond criticism.

The work is well and copiously illustrated.

SUBPREPUTIAL MEDICATION.—The *Medical World* claims advantages in the treatment of gonorrhœa by what is termed subpreputial medication. The method consists in rubbing up morphine and cocaine in lanolin (wool-fat), and inserting it under the prepuce after thorough cleansing. Dr. Taylor claims that this at once relieves all pain by producing complete numbness of the whole organ. He claims that the advantage of lanolin over other vehicles is the readiness with which it is absorbed. He applies sufficient of the mixture for the patient to have one fourth of a grain of cocaine at once; but we think in violent cases this might be increased to one grain or more, since the hypodermatic injection of one or two grains produces no serious results. This is a mode of treatment that leaves the erring Hebrew out of account.

THE Doctor who holdeth his peace impresseth his patient.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

REPORTS OF SECTIONS.

(Continued from page 220.)

SECTION ON SURGERY.

(Special for The Medical Record.)

WEDNESDAY, AUGUST 11, 1886—SECOND DAY.

MR. ERICHSEN'S ADDRESS ON THE TENDENCY OF MODERN SURGERY.

The President of the Section, Mr. Erichsen, Surgeon Extraordinary to the Queen, and Consulting Surgeon to University College Hospital, London, took the chair at 2 P.M., and delivered a presidential address which occupied rather more than half an hour in delivery. He took for his subject "The Tendency of Modern Surgery," by which he meant, he said, the lines that it would be most profitable to follow in the immediate future by those seeking to advance surgery beyond its present lines of undoubted excellence—not the lines that led to success in its teaching, and still less in its practice—but with the advance in all that related to the science and art of surgery. Had they, in fact, reached the final termination of the old routes, and must they follow, if not new, at least less well-explored tracks, if they wished to reach a uniformly higher level? Before answering these questions he would consider briefly the direction in which surgery had advanced since the introduction of anæsthetics into its practice. The discovery of anæsthetics, he reminded his hearers, had been made by an American dentist, working without scientific aid and without any thought of the far-reaching consequences of his discovery. From this epoch he roughly dated the "development of modern surgery." This advance had been in three distinct lines—first, and mainly, in the extension of the scope and in the improvement of the methods of operative surgery; secondly, in the precision, both as to exactitude of performance and certainty in the result of operations; thirdly, in the application of those methods of scientific research by which those sciences are advanced on which practical surgery is based. Dealing in detail with the first of these three, he remarked upon what he said would now be regarded as the horrors—both as regarded physical suffering and absence of sanitary precautions—of the præ-anæsthetic days. The scenes witnessed then the present generation of surgeons could hardly realize. The change that had come over the whole field of operative surgery was more than startling. Operations which Robert Liston—the boldest surgeon and the most skilful operator of his day—would have shrunk from attempting were now daily performed, and organs which were supposed by him to be forever safe from the knife, were now incised or extirpated as matters of ordinary routine practice.

Such had been the skill acquired in recent years that he (Mr. Erichsen) thought there could be little doubt that the final limit had been reached in the direction of all that is manipulative and mechanical, though within these limits there might be much of movement, of change, and of modification. Every artery in the human body accessible to the surgeon's scalpel had been tied, and they had reached the final limit in operations on the arterial system. Every limb had been long since amputated at its highest point; every large joint had been excised. Sculpture, architecture, painting attained their highest degrees of excellence years ago; surgery, he thought, was now in the same position. Turning to the advance in surgical precision, he said there was little left to be desired so far as exactitude of performance was concerned, while precision of result had been obtained as far at least as the wound was concerned. The rules laid down for most operations were so precise that the surgeon could hardly err, the more so as the use of anæsthetics, by rendering the patient insensible to all suffering, made it unnecessary to operate against time, a cause of much fatality in former days. The modern surgeon could assure his patient that there would be no suffering during the operation and no pain afterward, except when the wound was dressed, for any other could be averted by antiseptic dressings. Precision of result, so far as recovery was concerned, was less certain, but here also the gain had been immense, and death after an operation was now looked upon as a rare contingency. Coming next to the application to practical surgery of those methods of scientific research by which those sciences are advanced on which the practice of surgery is based, the speaker showed that the art of surgery had ever been in advance of the science, and that science had too often had to content itself with giving a rational explanation of the phenomena already determined by the art of surgery. What was termed "scientific surgery" was of comparatively modern origin, and dated from the days of John Hunter. Art was final, but science was illimitable. They had yet to learn much from that compound science, biology, in its application to the elucidation of surgical problems—that compound science of modern creation, into which physiology and histology, pathology, chemistry, and physics entered in equal proportions, which worked by means of experimental research; and this was the line of investigation which, he ventured to think, promised the greatest and most useful results to the cultivation of surgery in the future. The speaker concluded by instancing a few of the more important results that had already rewarded scientific research.

At the conclusion of the President's address, Sir Henry Thompson read a paper, introducing

A DISCUSSION ON SUPRA-PUBIC LITHOTOMY.

He said it was a question of what operation was best to remove a stone of large size. Crushing was now considered the best—except for very large stones—but this was not so formerly. Lithotomy was then in vogue, and was attended with great mortality in cases where the calculi were large. Sir Henry Thompson said that at an early period of his career he had endeavored to find some other method than cutting. He gave a graphic description of the effects of removing large stones by perineal operation. After referring to eight deaths as occurring in twenty-five cases of lithotomy, he spoke of a series which were treated by crushing without any death occurring. Lithotomy acquired its repute under Cheselden, who operated mainly on young children and middle-aged adults with stones of medium size. To-day the situation was changed. The lateral operation was always difficult for large stones, and it was for those of exceptional size that the supra-pubic operation was designed. He enumerated

EIGHT ADVANTAGES AS ATTENDING IT.

1. There were no important structures in the line of the incision, or which could be injured by the forceps. 2. The space for manipulation was practically unlimited. 3. There was no danger from hemorrhage, as any which might occur could easily be stopped. 4. The incision was easier of performance, and the removal of the stone safe and easy. 5. The urine left the wound drier and safer. 6. Antiseptics could be used. 7. It was impossible to injure the sexual organs, or to produce recto-vesical, or vesico-vaginal, fistulæ. 8. It was better for large stones. There were but two possible dangers:

The peritoneum might be opened, or extravasation of urine might occurr. He would deal with the latter first. The risk of its taking place was small, and it could only occur from needless interference outside the bladder. No part outside should be approached save in the line of the incision. There was only one way in which it occurred. The stone sometimes emerged spontaneously, the bladder contracting around it. Only one who had met with such a complication knew what to do. In such cases manipulation with the staff might cause extravasation. It was interesting to note that John Douglas made a similar remark as to the use of the staff.

IN THE MODERN SUPRA-PUBIC OPERATION NO STAFF WAS NEEDED.

As to the danger of wounding the peritoneum, that was *nil*. He had never seen this happen, nor even heard of its happening; but even if it did occur, modern resources would enable us to deal with it. The modern method of raising the bladder had the advantage that it aided us in avoiding the peritoneum; but this was not the only benefit of the method.

AN ADVANTAGE OF THE SUPRA-PUBIC OPERATION WAS THAT WE COULD EXPLORE THE BLADDER WITH THE FINGER, NO PROSTATE INTERVENING.

To raise the bladder he used a rectal bag distended. He had never used or advised one containing more than twelve or fourteen ounces. He had lately used and advised a more elongated bag, slightly flattened from before backward. This was introduced as soon as the patient was under ether, and distended with two syringefuls of water from a syringe containing six ounces. The catheter was then passed, and the bladder slowly distended by injecting from six to twelve ounces of weak boracic lotion. It would then form a dull, rounded tumor above the pubes. The surgeon, standing on the left of the patient, then made the abdominal incision from below upward. A separator was used to keep the tissues apart. The stone was removed with the scoop and a finger, or by two fingers without the scoop. He did not advise closing the wound in the bladder completely at the time of the operation, as there would be some risk of forcing urine through the wound. There would be less danger of this in children. A catheter was passed into the bladder above the pubes, and left in from twelve to forty-eight hours.

A CATHETER IN THE URETHRA WAS UNNECESSARY,

and only a source of annoyance. Sir Henry Thompson said he had operated by the supra-pubic method on eleven patients; seven of these were old men. Three were cases in which the stones were very large, one being a stone of twelve ounces. One was a patient with a very large prostate, so large that the bladder could not be explored from the perineum. Sir Henry Thompson concluded by expressing a regret that he had not used the supra-pubic operation sooner, but it was a satisfaction to him to think that he had introduced it into this country soon after Taylor had employed it.

Mr. Reginald Harrison (Liverpool) showed a large stone removed by the supra-pubic method, and in the removal of which midwifery forceps had been employed. For the last twenty-five years he had used lateral lithotomy, he said, and chiefly in children, because he preferred the crushing operation for adults. The mortality in his cases had been only one in twelve, and he did not think better results could be obtained from the adoption of the supra-pubic operation until better evidence than that at present adduced had been brought forward in its favor. It was important to study the subject. He had never met with any serious difficulties in removing by the lateral operation stones weighing as much even as five ounces. Such difficulties as had occurred would not, he believed, have been removed by the adoption of the supra-pubic operation. If, either in lateral lithotomy or in operations on the prostate, the wound continued to bleed, he plugged it with an india-rubber plug exactly fitting it. He kept an assortment of these plugs of various sizes. He concluded by saying that he should be reluctant to abandon lateral lithotomy in favor of the supra-pubic operation, save in the case of stones of very large size.

Mr. Cadge (Norwich) suggested that a middle course between those just put forward might be preferable. He could not forget that Cheselden had tried the high operation, and relinquished it for the lateral one. He would not quote figures, as they were delusive in the absence of all particulars as to age, etc., of patients. He would, however, remark that as yet, so far as he believed,

THE SUPRA-PUBIC OPERATION HAD BEEN PERFORMED IN ONLY ABOUT ONE HUNDRED AND FIFTY CASES IN ALL.

Brodie, though, had a hundred cases of lithotrity before he published his monograph on the subject, which at once captured the profession. We should, he said, wait for further results of the method.

Mr. Jessop (Leeds) said he had only done the supra-pubic operation once. He described the case, and said that he found no difficulty with the operation.

Mr. Barwell said that in boys (and also in girls) the lateral operation presented certain difficulties which were removed by the supra-pubic operation, and the latter was extremely simple. While on this subject he wished also to refer to epicystotomy. There was no doubt that when we had to do with a tumor of the bladder the supra-pubic operation would enable us to remove it easily. He would join issue with Sir Henry Thompson as to

THE DESIRABILITY OF DISTENDING THE BLADDER,

because large stones mostly occurred in old persons with enlarged prostate, and by distending the bladder you also distended the membranous portion of the urethra. This was not always safe in old persons. He did not either approve of distending the rectum in all cases. Mr. Barwell then went on to speak of the relations of the bladder, and reminded his hearers that the peritoneum was not attached to it. As regarded the results of different methods of treatment, he did not think that a very decided numerical superiority could be claimed for any one. In performing the supra-pubic operation he thought it was desirable to sew up the abdominal wound, so as to prevent a ventral hernia just above the bladder.

Dr. Ward Cousins (Southsea) said that the supra-pubic operation had been resuscitated by the attention which had been paid to its details and the use which had been made of antiseptics. Its employment was desirable in cases of encysted stone, and also in cases of stone where the prostate was also enlarged. He described a case in which the patient suffered from stone, enlargement of the prostate, and the hip- and knee-joints on one side were quite stiff. He performed lateral lithotomy, but would certainly select the supra-pubic operation if dealing with such a case again. He thought lithotrity would prove the best for very small stones, and the supra-pubic operation the best for large ones. As to those of medium size the question was as to choosing the lateral or the supra-pubic operation. The former was safe, but was regarded as not being very easy. It was, however, easy if a very sharp knife were used and a straight direction into the bladder kept to. He did not approve of withdrawing the staff (the bladder and urethra being distended) before the bladder was reached by the operator. Such a plan might be safe enough in the hands of Mr. Cadge, but he did not think it a wise one for average operators. Dr. Cousins advocated the use of his (Dr. Cousins') straight staff, and said that with this he did not think the operator could go wrong. This statement caused some amusement.

Surgeon-Major Keegan showed some specimens, and referred to the shorter stay in hospital of children

after lithotrity. As to lithotomy in children, he said that Surgeon-Major Freer had cut one hundred and forty-three without losing one.

SIR WILLIAM MACCORMAC said he saw Langenbeck perform the supra-pubic operation years ago in children, and point out its applicability to them. He agreed with Mr. Barwell that vesical and rectal distention were both needless. He referred to a case in which he had performed the supra-pubic operation. The operation was done antiseptically, and the skin wound was an inch and a half long. He removed a stone the size of a marble. He sewed up the wound in the bladder with catgut, then the abdominal wound, and closed the skin wound except leaving a catheter in. The skin wound healed completely in fourteen days.

MR. JACOBSON said we should discuss the operation not for the sake of beginners, but for the sake of those who frequently performed operations. He approved of the supra-pubic operation, as avoiding many dangers.

MR. BRUCE CLARKE said he would only touch on two points. First, the use of the bag. He referred to a case (recently reported in *The Lancet*) in which Mr. Thomas Smith performed the supra-pubic operation at St. Bartholomew's Hospital. In this case he had had the advantage of assisting Mr. Smith. The stone could be distinctly felt, before the operation, by placing one finger in the rectum and another above the pubes. On distending the bladder no distention of the rectum was found to be necessary. The other point was as to the healing of the wound. He had seen four cases in which the wound did not heal easily. Was this because the drainage-tube was left in too long? If so, it would be an important point in the after-treatment to remove the drainage-tube in forty-eight hours, if possible.

DR. HINGSTON (Montreal) said lithotrity, where it could be performed, was preferable. But it was not always possible to do lithotrity. Whether to crush or cut should be determined by the size of the urethra, and this was not always proportionate to the circumference of the flaccid penis, as had been supposed. The size of the urethra varied considerably, and each person was peculiar in this respect. He had introduced a No. 6 lithotrite into the bladder of a male child three years of age, and even in one aged only two. He preferred lateral lithotomy as the cutting operation whenever feasible. Sir Henry Thompson had placed the limits of the lateral operation at stones of three ounces. Mr. Reginald Harrison thought that stones weighing as much as five ounces might be dealt with by it. He (Dr. Hingston) thought size rather than weight should be considered; and size even was not the only feature, for we should

TAKE INTO CONSIDERATION THE DEPTH OF THE PERINEUM, OBESITY, ETC.

Taking, however, the weight as the standard, he thought that to place the limit at three ounces was to put it rather low, while to put it at five ounces was making it rather high. He had, though, removed a stone weighing more than five ounces by the lateral operation, but only with difficulty, the operation occupying forty minutes.

SIR HENRY THOMPSON then replied. He repudiated the suggestion that Cheselden set aside the supra-pubic operation. Cheselden continued to perform it. There was something about the disuse of the supra-pubic operation that we had not yet got to the bottom of. He remarked that the supra-pubic operation was very suitable for children. Respecting the choice of different operations for different cases and the fixing of limits, he thought different operators would have different views and find different operations suit them. The personal equation came in surgery as in astronomy. Just as an astronomer knew that, of two observers at different stations, one would see a certain star one-sixteenth of a second before another, so no two surgeons would be exactly alike. He defended himself for bringing forward his cases. Although not numerous, he had deemed it right to do so to elicit opinion on the subject.

SECTION ON GENERAL MEDICINE.

WEDNESDAY, AUGUST 11TH—FIRST DAY.

DR. BROADBENT, of London, in the chair.

The proceedings were commenced by a paper by SIR ANDREW CLARK, of London, on

CASES WHERE DISEASE OF THE HEART HAD EXISTED UPWARD OF FIVE YEARS.

The opener of the debate said he was about to treat the subject from the personal point of view, and handed round a printed paper containing the history of 684 cases of heart disease that had come before his notice of late years. He could not exactly say that all the cases were thoroughly diagnosed; and no doubt in the short examination he was frequently obliged to give to a case, aortic bruit or mitral murmur might not always be clearly defined. Then again, as to the histories of the cases, patients were often inaccurate, and their reports must be taken *cum grano salis*. None of the murmurs in the list were merely occasional. When to these 684 cases he added the numerous out-of-door patients he saw of an afternoon, it might be imagined what a very large number of persons were going about with valvular disease, and looking very well indeed. Of these 684 cases no less than 272 consulted him for dyspepsia; 57 for rheumatism; 22 for gout; 44 for diseases of the nerves; and 17 for eczema, while only 4 were phthisical. One of the most striking cases of longevity connected with heart disease occurred in the person of the chaplain to the London Hospital, who, being about to marry many years ago, had been examined by the medical officer of an insurance company, and told that he had an incurable disease of the heart. The patient gave up his marriage intentions, and resigned the chaplaincy of the hospital, whereupon the committee granted him a retiring life pension. Fifty years afterward, being still in receipt of this pension, Sir Andrew Clark had to examine him, and found the same bruit present for which he had resigned his post so long ago. In another case, a patient he had seen sixteen years before had a double valvular bruit, but was now in good health after a visit to the West Indies. In another case, a lad was brought to him by his mother to see how his life could be made tolerable, and not with any hope to do him much good, but to know how long he might be expected to live. He had aortic systolic bruit, aortic mitral bruit added, and a large heart. He was, however, in good health, and Sir Andrew Clark advised that he should be sent to a private school. In due time the boy grew up and became a clergyman in Horton, and a most popular preacher, doing a great deal of parish work.

In a fourth case a gentleman came from Manchester to see a London physician, expecting to die soon. A loud mitral bruit was heard. There was no congestion at the base of the lung, and his other symptoms were good. He had a splendid business, but was prepared to live in poverty and quiet. He had been long affected with this murmur, and the advice given was that he should go on as usual with his business. In the fifth case cited, a patient sent for a doctor, and he told him he had disease of the heart. He was told not to go upstairs, and at once became ill through nervousness. He consulted another doctor, and he advised moderate exercise and plain living, so that at the age of eighty-five the patient was still alive and pretty strong. There was, however, another side to this question. A patient, a young girl, had mitral regurgitant disease, and her medical attendant permitted her to take violent exercise. In fourteen

days after the permission the child was carried off by ulcerative endocarditis. There were cases where—especially in childhood, but also in adult life—valvular bruit appeared for a time and disappeared. In the case of a patient brought to him by a practitioner in London, he had given the prognosis that the valvular bruit would disappear, and in a few years this took place. Again, in the case of the sister of the late Dr. Anstie, there were both aortic constriction and diastolic bruits. She was operated on, and in the course of six years subsequently no bruit could be heard. It was impossible not to have some impressions flowing from these facts, and these were that the retention of health was favored by attention to simple physiological laws. Patients must place themselves in the best condition to resist disease. The will must be cultivated to avoid worries, and to secure peace and cheerfulness. Hurry, worry, and disquiet were dangerous to patients with heart disease, and all sorts of irregularities should be avoided, such, especially, as excesses in eating and drinking. Kind mothers often did such patients great harm by wishing to feed them all day long. Over exertion and under-exertion should both be avoided, and the abuse of tea must be avoided. The abuse of tobacco was worst of all in heart disease. Failing strength of the ventricles was much to be dreaded. He concluded that hosts of persons in good health go on living with valvular disease of the heart.

DR. GAIRDNER, of Glasgow, said he also would speak only of hard facts, and it was curious that twenty-five years ago he had published the history of many cases of heart disease where the patient had lived for many years in good health.

In the consideration of such cases, it was impossible for the consulting physician to work out the details of the patient's career. In his work on "Clinical Medicine" he had made the remark that auscultators were apt to give far too gloomy a prognosis in heart disease. In that work (p. 568) he had narrated the history of a medical man who discovered that he had mitral regurgitant disease. There was also aortic obstruction; but there was no alteration in the size of the heart, and the patient forgot his disease and lived for many years in good health. In 1881 he had sent to one of the medical journals the case of a man who had existed a lifetime with valvular murmur, and in middle age had had an attack of œdema of the lungs, but recovered, and was still alive and married to a second wife. He enjoyed very good health. In his third case, the patient had walked, in 1861, over the Highlands, although he was the possessor of an aortic-obstructive bruit. He died since that date. In his fourth case, a relative of Dr. Balfour, of Edinburgh, had a bruit, probably congenital in nature and arising from perforation of the septum. The chief interest in the case was that there was a loud murmur present. He was about to marry a second time, and was insured thirty years after the bruit was first detected. The patient died of cerebral symptoms, not clearly connected with the valvular disease. In 1862 he saw a boy with a probably congenital murmur and slight chorea. He grew up and married, and was now forty and in good health. Twenty-five years ago, in his book, he had said that valvular disease in young persons was more rapidly fatal than in adults, and, in reading this, Dr. Watson had differed with him. He now thought Sir T. Watson was right. In the sixth case he gave, a clergyman was told that he had valvular disease of the heart; but he was able to walk over the glaciers in Switzerland. That patient had aortic double-bruit lasting twenty years. In another case mentioned in his book (p 602) a patient with valvular murmur died of pneumonia, and the heart was found to be quite unaltered in form.

In another case of mitral stenosis, probably congenital, of old date, in a woman with a large family, she had lived on in good health, although often with great anxiety. In the last case he mentioned, the patient had mitral stenosis and hemiplegia, and a gentleman had recommended him for insurance; but he, Dr. Gairdner, knowing that that gentleman was consultant to a life office, had sent him thither for insurance again.

DR. CLIFFORD ALLBUTT said that the main causes of heart disease were within and without the heart, and this made much difference in the prognosis. Rheumatic fever came in early age, and a young heart would adapt itself much more easily to damage than an old one. In this he agreed with Dr. Gairdner's present opinion, who had sent him his book twenty years ago. He cited the case of a marble mason who had carried on his laborious trade for thirty years with a mitral regurgitant disease. Another gentleman with swelling of the legs was supposed to be in a dangerous position from valvular disease of the heart. He had, however, found that the swelling of the legs was due to another cause, and gave a good prognosis. The gentleman was still alive and well at the age of seventy-four. A Leeds inventor, who had enriched many capitalists by his inventions while he himself had remained poor and hard pressed for a living, had lived for ten years with valvular murmur in good health. The use of tobacco was often most hurtful in disease of the heart, and so was the abuse of tea; but still more dangerous than these was the use of alcohol. Tobacco evils were transient, and so were those of tea, but alcohol was permanent in its bad effects. The mere loudness of a murmur was of no importance.

THE NOISY MURMURS WERE NOT SO DANGEROUS IN THE WAY OF REGURGITATION AS THE MORE SILENT MURMURS.

The most important point in prognosis was the position of the heart's apex and the change made in the current of the blood. When the murmur was slight there was often the greatest danger. The mitral valves usually became diseased before the aortic. Hence aortic murmur meant double murmurs. Patients with heart disease might sometimes be insured. Cases of aortic regurgitant, however, were in danger of sudden death. If mitral disease was known to be free from external complications, such a patient might be insured in an easy schedule without over-high premiums. The outcome of this debate was to prove very comforting, and to show that in all cases of organic disease the prognosis had hitherto been far too gloomy.

DR. BRISTOWE cited the case of a lady who fifteen years ago had rheumatism; but, although she had a murmur, was quite in good health. The loudness of the murmur, he agreed, had nothing to do with the prognosis, and many people would lead a far more pleasant life if they did not know that they had such a disease. The late Dr. Murchison had aortic regurgitant disease. He consulted a friend as to whether he should give up practice, and he was advised not to do so. He lived seven years longer. He himself, Dr. Bristowe, if he had valvular disease of the heart, would far rather remain in ignorance of his illness.

DR. LEACH said he had notes of ten cases of interesting valvular disease of the heart. In one there was aortic stenosis after scarlet fever, in a boy, aged six, who was now, at the age of nineteen, quite well. A clergyman, aged thirty-three, had twelve years ago been found by him to be suffering from valvular disease of the heart. In this case he gave a good prognosis, as the tracing was nearly normal in character. Patients with valvular disease of the heart, he thought, should not be advised, as some German physician had lately done, to climb hills as a curative process. They should, however, take moderate exercise. It was, he said, dangerous to insure the life of a man with valvular disease of the heart.

DR. BOWLES (Folkestone) said that, as a member of the collective investigation committee, he could not but think that hæmic murmurs had a meaning. Twenty-seven years ago he saw a woman with valvular murmurs. He gave ten grains of Dover's powder, and the murmur disappeared. Temporary murmurs were of little impor-

tance. A gentleman, aged forty-two, had a temporary murmur. Some murmurs lasted for some time and then disappeared. In relation to aortic regurgitant, the danger in these cases had been rather exaggerated. He knew a lady who had lived with valvular heart disease no less than forty-six years; she eventually died of ulcerative endocarditis and femoral aneurism.

SIR ANDREW CLARK said he had never had anything to do with an insurance company, but sometimes had been asked his opinion on a doubtful case. He thought such lives were of good prognosis, if the murmur had lasted two years, and there was no hepatic or lung congestion, and the general health good. On these conditions he thought insurance companies might accept such a life. It was better, he agreed, not to tell a patient that he had heart disease. The public was accustomed to take a fault-finding attitude toward physicians, and often called in consultants merely to find fault with their medical man. Whenever, then, heart disease was diagnosed, a friend who was discrete should be intrusted with the information, for the credit of the physician.

NEURASTHENIA.

DR. PLAYFAIR then read a paper on neurasthenia. He said that general physicians were always finding fault with obstetricians for constantly making vaginal examinations of these patients, and he was anxious to admit that this might be the case, and that there were cases of neurasthenia to which this advice was very applicable. This was a disease only of the richer classes, and only seen in private practice. The name was liable to be found fault with. It had been styled myosis inquieta. The neurasthenic patient was one who has broken down, and was as much in need of treatment as a patient with typhoid fever or with a broken leg. It was a clearly defined disease, and required very special treatment. The first case he would cite, and the photograph of which he sent round, was that of a lady forty-three years of age, who had collapsed and could not walk across the room. The disease had lasted three years, and was supposed to be cancer. In two months of careful treatment she was quite cured. In another case, a young lady, aged seventeen, broke down from overwork at school; but by treatment was soon put to rights again. In another case, a man, aged thirty-three, had been on a cattle ranch in the United States, and had what was considered "grass dyspepsia." His weight fell to eight stone, although his height was six feet. He was treated and got splendidly well. There had been a disease named spinal neurasthenia by Cheyne and Witt, but it was not this one. It was a disease of the nervous system and required a distinct treatment, which he had described at the Worcester meeting of the Association, and which was most important, as the tendency of modern medicine was rather, he thought, to diagnoses than toward therapeutics.

DR. B. HOVELL read a paper on the same subject, and cited the case of a lady with pains in her back and great nervous prostration, in whom the uterus was quite normally posited and normal in all its functions. There was no spinal disease. Under rest, tonics, and sea air she got well. A maiden lady, aged fifty-four, had intact hymen and great pain in sacrum, and was cured by similar treatment. Neurasthenia was only too common a disease in practice, and far more common than hysteria, of which he had seen very few cases.

DR. DRYSDALE, of London, was sorry the authors had not repeated the details of the treatment, as the majority of practitioners were still in great perplexity as to what the clear diagnosis, and nature, and treatment of the disease was. He hoped, that in his reply Dr. Playfair might give a brief summary of the principal features of this special treatment.

DR. HUGHLINGS JACKSON mentioned cases of this disease which had been greatly improved by the treatment of Dr. Playfair.

THURSDAY, AUGUST 12TH—SECOND DAY.

DR. BROADBENT, of London, read his introductory address to the Medical Section, under the title of

SOME INJURIOUS REMOTE EFFECTS OF TREATMENT.

Of course, he said, alcoholic prescriptions and the persistent use of opium were examples of what he meant. Even the bromides in medicinal doses produced acne and transient dementia. Cocaine already was beginning to have its list of victims, and symptoms resembling general paralysis were caused by it. Colchicum and veratria were of great service in gout, and it is necessary to prescribe them to give release from pain in many cases, but it was necessary that the system should afterward be cleared by the administration of alkalies. But the gouty man will go on taking these remedies over and over again, year after year. Diseases were often produced by such conduct in the patients, and high tension of blood in the arteries was a frequent result. Of this he gave cases. In 1885 a man consulted him with symptoms of high tension in the arteries, but whose urine was of good color and contained no albumen. He had ten ounces of blood taken from him. This patient had taken much colchicum for his gout. Painters in London, who were affected with lead-poisoning, also often were subject to gout, as Dr. Garrod has shown, and these men were accustomed to take a number of pills containing colchicum for years.

Diseases otherwise not dangerous were often

MADE FATAL BY LONG-CONTINUED USE OF SUCH DRUGS.

Thus gangrene of the lungs, a very uncommon disease, was comparatively frequent in persons with lead-poisoning who had treated themselves with much colchicum. The system of training called Banting, and which consisted in the eating of nitrogenous matters and abstinence from fats and from fluids, with a good deal of exercise superadded, was not dangerous; but patients often left out the last part and led sedentary lives. Glucosuria in old persons was almost always associated with tension of the arteries. The heart often suffered in such cases, and cures were effected at Vichy and Carlsbad on account of the lowering effect of the waters of these localities on the pulse-tension. The object of the physician ought to be to give happiness and comfort to his patient. There was another class of cases, that of nervous headache in young adults, produced either by irritation or by arrest of the catamenial flow. Such affections often disappeared in advancing years. Sometimes persons, as in France, were proud of their migraine. In many instances these headaches were the result of gastro-hepatic derangement, and careful feeding up and the judicious use of arsenic would effect a cure. He had such a case lately in a very hard-working man, and told him that an enema would relieve him, which it speedily did. One of the most dangerous modes of treatment of disease was to be seen in the case of the treatment of dyspepsia by very restricted diet. Patients often would bring themselves to the brink of starvation in order to soothe the pangs of dyspepsia. After many trials a medical adviser was at length called in, and he, too, was perhaps very stringent in his injunction against some particular kind of food. But dyspepsia was often due to neuralgia of the intestines, and was greatly increased by this same starvation diet. The patient went on taking less and less, until at last soups and biscuit are the whole of his diet. Such patients then become seriously ill and take to bed, when they recovered because enjoined to take a generous diet on account of the weak state which treatment for dyspepsia has brought them. In another series of cases of dyspepsia, cold produced great uneasiness in the intestines in patients when winter approached. Constipation was often one of the symptoms it produced. In such cases it was not the stomach that was in fault. Tonics and good food were indicated, and not low living at all, which did harm.

SOME OF THE EFFECTS OF GALL-STONE.

DR. ORD inaugurated a discussion on the effects of gall-stones by reading a short paper on this subject. Gall-stones, he said, were often continuously found in patients on whom they caused no symptoms. Was it possible, then, that some persons went on all their lives passing such stones without being even conscious of doing so? Gall-stones of large size might pass into the intestine without any symptoms to the patient. In one case such a stone caused distention of the intestine, high up, and all the symptoms of obstruction. An incision was made in the abdomen, and the intestines gradually examined until a point was come to which was congested and high-colored. The patient died, and a large gall-stone was found a little higher up which had caused the obstruction. Gall-stones might exist without causing any jaundice. A clergyman's wife, a patient of his, had never had jaundice or pale stools. When he saw her, duodenal ulceration was diagnosed; she had a large biliary calculus. In the case of another lady, aged forty, pain in the epigastrium was complained of when she was fasting, and this pain lasted some days. The face was well-colored, and there was gastric catarrh and paroxysmal pains. On pressure on the region where the pain was felt a hard body was discovered, and she passed a very large gall-stone, and shortly afterward another. A gentleman, aged sixty, had biliary colic with jaundice and ague. The quantity of urine was increased, and he suffered much pain. His weight fell, and reached only ten stone from being a heavy man. Then a febrile state of the system supervened. The catarrhal state of the stomach was treated. He had glycosuria, and then passed a gall-stone, after which his nutrition improved rapidly, so that he regained his weight of fifteen stone. He had heard of this patient's death two days ago. A gentleman had attacks of fever, and salines were given. He then passed a calculus and the symptoms disappeared. Glycosuria was sometimes produced by the irritation of the liver caused by gall-stones. A laborer, aged seventy-four, was admitted into St. Thomas' Hospital with aortic obstructive disease and albuminuria. Soon after this jaundice supervened, and glycosuria, produced by the irritation of the liver. Gall-stones were frequently present in patients with malarious disease. Hemorrhage sometimes accompanied the passing of gall-stones through the duct.

DR. CHURTON, of Leeds, read a paper on

NON-DIABETIC ACETONURIA.

A lady patient of his suffered recently from acetonuria, and her urine was frequently tested and gave the usual reactions of this condition. The patient had been married for some years and had been subject to frequent attacks of vomiting. She had pains in the right hypochondrium, and then jaundice ensued. Gall-stones were considered to be stopping up the cystic duct. The acetonuria was doubtless due to the irritation in the liver. A man, aged fifty-two, had stricture of the œsophagus, and his urine gave a purple tinge with tincture of steel. A lady with diabetes had also acetonuria and albumen in her urine. The presence of acetone in the urine, said Dr. Churton, was not by any means a fatal symptom; but it was not unlikely that the presence of acetone made the condition of the patient unsuited for operations.

PROFESSOR CHARCOT, of Paris, said that the temperature of the body in paroxysms of biliary colic might rise as high as 40° C. (104° F.). He had no theory to propound in this matter, and would readily adopt that put forward by Dr. Ord, that the fever was the result of nerve-irritation, or that of Dr. Murchison, that it was caused by the production of some chemical poison of the system in the liver. In matters of theory he was inclined often to adopt a little of all kinds. The facts were the main point in clinical medicine.

SIR PETER EADES said that modern practitioners had frequent opportunities of treating gall-stones, owing to the increasing sedentary character of the liver of civilized people.

At present we know that gall-stones might be in the cystic duct, the gall-bladder, or the duodenum, but in the actual state of science it was not possible to differentiate these various positions of the stone.

In future it would perhaps be possible to recognize in what part the calculus was lodged, and perhaps then surgical aid might be called in at an earlier date, and then a simple operation might save life. Our division of gall-stones was into mild cases, and dangerous ones in which the patient might be carried off. Most men had seen examples of both of these groups. Disordered state of the bile was caused, and secondary or tertiary disorders of the other abdominal viscera by sedentary habits. This was strikingly seen in the case of the patients in lunatic asylums who were very prone to having biliary calculus. The disease was occasionally hereditary. Cancer of the liver, too, was one of the causes of gall-stones. In young, nervous women, ovarian irritation might often simulate the symptoms of renal calculus. Renal colic, also, was occasionally caused by ulceration of the ducts. Diabetes occurred after the passage of gall-stones in a patient of his, a gentleman, who passed no less than one hundred and thirteen stones. A lady patient had a tumor of the gall-bladder, but lived for some time, and died of another disease. With regard to treatment for gall-stones, expectation was by no means always good treatment. Chloroform often gave great relief and, of course, also sub-cutaneous injections of morphia. The use of purgatives in such cases was, he thought, bad treatment. In some cases operation might be called for. For instance, a man he had seen became comatose and had acute jaundice arising from the presence of a small calculus in the cystic duct. He died, but might have got quite well had he been operated on.

DR. GAIRDNER, of Glasgow, said that his experience had taught him that a possible mistake in diagnosis might occur in thinking that angina pectoris was present, when there were only gall-stones. In one case he had been so fortunate as to make this diagnosis, and it was soon confirmed by the presence of jaundice. Two years ago he had published in *The Lancet* a case where forty calculi had been found in the gall-bladder, although the patient had never had any symptom to indicate their presence. There was no jaundice in the history of the case.

DR. CLIFFORD ALLBUTT, of Leeds, said that attacks of biliary colic might occur without jaundice. It was often some weeks after the colic that the calculi were passed. He did not see that the angular form of the stone could have much to do with the occurrence of hemorrhage or other symptoms. Patients sometimes died from the shock caused by the passage of the stone. In the case of a lady who had consulted him for biliary colic he had given a favorable prognosis, but this was not justified as she died very shortly after from such shock. A curious case had been seen by him lately. A gentleman was thought to be hopelessly suffering from obstruction of the bowels, and had been seen by several consultants and given up. He asked to see an old medical friend, who came merely to please him, but was told that the man was nearly moribund. That gentleman passed his finger far up the patient's rectum and came upon something far up, against which he pushed. This had the effect, without his perceiving it, of dislocating a large biliary calculus which was shortly afterwards passed, and after copious stools the patient made a good recovery.

DR. SAVAGE, of London, read a paper on

MENTAL SYMPTOMS WITH LOCOMOTOR ATAXIA.

He mentioned the case of a patient, lately seen, who shortly after marriage developed ataxic symptoms and then became insane. He had formerly suffered from syphilis. In another case seen by him, a man had been ataxic for some years and then developed insane symptoms. With regard to prognosis in such cases his experi-

ence went to show that locomotor ataxy accompanied with mental symptoms was not more rapidly fatal than ordinary locomotor ataxy. The author created much hilarity by his vivid description of the quaint sayings of such insane patients with locomotor ataxy.

Dr. Ord having briefly replied, a paper was read by Dr. Ralfe on

FUNCTIONAL ALBUMINURIA.

He said that a large proportion of all recorded cases of this affection were seen in young persons. Intermittent albuminuria was not infrequent, and accompanied with increase of urea and bile-pigment. Hæmoglobinuria was the usual cause of it in young males who were also anæmic. The disease was apt to be associated with some amount of jaundice. In cases of hæmoglobinuria there was increase of urea in the urine. Functional albuminuria was only a symptom, and in many cases there was no chronic nephritis. In one case, lately seen, there were sixty ounces of urine passed daily with a specific gravity of 1,022. There was an increased quantity of urea and abundance of hæmoglobine. This disease was common enough, and existed with and without icteric symptoms. The essence of the disease consisted in irritation of the nerve-centres. Such patients had often some hereditary taint. The treatment should be careful and the diet good, but only slightly nitrogenous in character. The use of quinine and iron was indicated, and arsenic was often very useful.

Dr. C. R. Drysdale, of London, read a paper on

THE TREATMENT OF PHTHISIS.

He said it could hardly be alleged that consumption was a curable disease when it could be still said with truth that out of 1,000 deaths occurring in a highly civilized city like Paris every week, 200 were due to consumption and 20 or 30 more to other forms of tuberculosis; that is, between one-fourth and one-fifth of all Parisians die of it. Unfortunately, until two or three years ago there was no clear doctrine as to the nature of the disease. Personally, he had always clung to the views expounded by Laennec sixty-seven years ago, who had at that time clearly shown the unity of the disease and its specific character.

Villemin, in 1865, showed that the disease was also virulent and inoculable. Pasteur explained the meaning of virulent diseases, and lastly Koch, in 1832, put an end to the idea that consumption could be caused merely by debilitating influences, and showed that there is one cause without which the disease cannot exist, and that is the parasite bacillus tuberculosis. Henceforth, then, the therapeutics of phthisis must be sought for in the same direction as we seek for the remedies of syphilis and hydrophobia. That is to say, that antiphlogistics, cod-liver oil, and analeptics were clearly inadequate. Phthisis was due to a specific micro-organism always inoculable on animals, transmissible from the sick to the healthy by means of inhalation of the dried sputum, very frequently propagated by heredity, and, when it is localized in one organ, susceptible of cure without damaging the system. Lastly, so-called scrofulous affections are usually due to the same parasite as phthisis. It was necessary to be unanimous as to the nature of the disease, otherwise it was hopeless to suppose that any great advance could be made in its treatment. The real difficulty consisted in the explanation of the heriditary transmission of the disease. Phthisis was very unlike syphilis on this point, for while the latter disease appeared in hereditary form soon after the birth of the child, phthisis was very rarely seen in children under the age of two years. It was held, however, by some that scrofula in young children was frequently the way in which the transmission of the disease showed itself. The statistics of heredity in consumption were extremely various, ranging from eleven per cent., according to Louis, to fifty per cent., according to Cotton. He, Dr. Drysdale, would be inclined to put the figure even higher than fifty per cent. With regard to the cure of phthisis, it was now well known to all who had paid much attention to the subject that patients every now and then, after being distinctly tuberculous, experienced an arrest of the disease and had lived many years subsequently in satisfactory health and able to transact professional and other business. For many years past he had been in the habit of interrogating members of the medical profession as to the numbers of medical brethren they had known who had suffered in early life from well-ascertained phthisis and who had recovered.

He had heard of many such recoveries under the most varied circumstances. For example, some of the British physicians resident at the Riviera and practising successfully there, had, many years ago, been phthisical. M. Erard had informed him that this was the case with several physicians practising in Algiers. Physicians in Colorado and in the Swiss air-cure resorts narrate the same tale concerning their own cases. Professor Parkes, of Nettley, recovered from a severe attack of phthisis and lived for many years after in good health, although he was eventually carried off by the disease. One physician recovered after a voyage to India. The same facts, although much more rarely, were observed among members of the working-classes. It might therefore be said that phthisis is curable in a variety of circumstances far too numerous to mention. Nevertheless, both theory and experience had shown that the pure air of high mountain districts and of the ocean, both of which localities were free from the impurities existing in inland places and low levels, were the climates, *par excellence*, for the cure of tuberculosis. In a recent visit to Davos, he, Dr. Drysdale, had, by interrogating the inhabitants of the adjacent district, ascertained that consumption does not exist among the natives of the high valleys who reside there. In the district of Langwies, some hours distant from Davos, he was told that no case of phthisis ever occurred. This fact has been over and over again mentioned by Jourdanet with regard to Mexico and Bolivia, by Spengler with respect to the High Alps, and by several authors with regard to Colorado and the Rocky Mountains. To those who could afford it, therefore, and they were but few, a prolonged residence in the High Alps afforded the best chance of a cure. With regard to the more direct treatment of the disease, the prolonged use of small doses of mercury had been tried, but with no good results. He himself had experimented with iodine, but without much satisfaction. It was said, however, that that useful parasiticide had been of great service in the shape of iodoform given in two-grain doses twice or thrice daily. In a recent visit to Paris he had conversed on the subject of the treatment of phthisis with M. Grancher and M. Pasteur, and must confess to a hidden hope that the therapeutics of phthisis must be looked for in the direction of experiments upon animals. Unluckily phthisis is not like syphilis, a disease which can be taken but once; but fortunately it can be transmitted to animals, and may therefore prove to be among the viruses which may be mitigated, as hydrophobia has recently been.

On Friday, August 13th, a paper was read by Dr. A. Whittle, of Brighton, on

THE TREATMENT OF MELANCHOLIA AND INSOMNIA.

In this paper the author desired to call attention to the value of venesection in some cases of melancholia with great arterial tension. This remedy often produced excellent results. A young man, aged twenty, had all the symptoms of high arterial tension. He was well nourished, but had vertigo associated with local congestion of the arteries of the head and great intolerance of stimulants. In some similar cases the symptom of melancholy was very slight at first, but gradually increased and made the patient feel suicidal tendencies. The brain shared in the general arterial disturbance. In the treatment of such cases even neuralgia was not always a counterindication, if the bleeding of the patient had marked symptoms

of arterial tension. Leeching was a good form of depletion in fit cases. He cited the opinion of Dr. Broadbent, contained in some of his writings, to the effect that such treatment was sometimes of great value. He sometimes bled to sixteen ounces. Dr. Broadbent quite corroborated the views put forward by Dr. Whittle, for in fit cases he had found venesection of great service in lowering arterial tension. Some time ago he had prescribed large doses of calomel to a lady with such symptoms, and her daughter said that the mother of the patient had had the same symptoms and had been cured of them by purgatives of an active kind.

Dr. Drysdale, of London, agreed that in cases of that kind depletion of some kind was useful, but doubted the advisability of reviving the custom of venesection which had been so common in his early experience of the medical art. In London, at present, this practice had so completely gone into desuetude that many persons had never seen venesection practised. Chemists, too, sold few or no leeches. He preferred to trust to drastic purgatives in these cases of congestion and high arterial tension.

Dr. Mantle, of Durham, read a paper on

THE ETIOLOGY OF RHEUMATISM,

considered from a bacterial point of view. He mentioned that in the examination of several cases of rheumatic fever in young persons, he had found that minute bacteria were to be found in the blood, which he looked upon as the cause of the symptoms. In a case of gout a gentleman had asked him to examine his blood, and in that case he had found bacteria in the blood. He therefore was inclined to look upon rheumatism as caused by the introduction of such organisms into the blood, and this view of the matter was strengthened by the modern treatment of acute rheumatism. In a case of gonorrhœal rheumatism, he had also found a microbe in the blood.

Dr. Drysdale, of London, said that ever since he had experienced the value of salicylic acid in the treatment of acute rheumatism he had been led to the views put forward by Dr. Mantle. Mercury and iodine had proved useful as germicides in syphilis, and salicylic acid and quinine were excellent germicides, so that he had come to the conclusion that rheumatism was a disease like ague, and was glad to hear that Dr. Mantle had seen what he had long believed to exist.

A Question of Diagnosis.—A medical student from a neighboring city writes: "A little incident occurred in this city which I desire to bring to your notice. The case is as follows: A man shot himself, the ball (22-calibre) entering the left submaxillary triangle, and probably taking a course upward, backward, and outward, for the patient complained of loss of hearing in the left ear. There was very little hemorrhage. This occurred about nine o'clock P.M. At four o'clock the next morning a physician was called, and after examining and probing the wound, declared the ball 'had severed the wind-pipe, and, striking the posterior wall of the throat (he probably meant the pharynx), had *fallen into the stomach.*' What I wish to ask is: 1, Is such a thing possible under these circumstances; 2, was there any chance of finding such a small bullet after the lapse of six or seven hours, swelling having taken place; and 3, would it not have been wiser to acknowledge the difficulty, or even impossibility, of finding the bullet under the circumstances?"

Anæsthetization during Sleep.—Dr. John S. Marshall writes to *The Lancet* that he succeeded in producing anæsthesia in a sleeping man by the A. C. E. mixture. The patient was a strong collier who was brought to the infirmary with a fractured thigh. Being worn out with pain, he fell asleep before his leg could be dressed. Dr. Marshall found him asleep, induced anæsthesia, and bandaged the thigh without awakening him.

Correspondence.

THE BRIGHTON MEETING.

(From our Own Correspondent.)

Before the Meeting.

Brighton, Sussex, England, August 9, 1886.

To-morrow will commence the Fifty-fourth Annual Meeting of the British Medical Association and the second of its annual meetings which have been held in this town. The former one took place in 1851 and the Association then numbered only as many hundreds (twelve) of members as it does now thousands. Brighton itself has also greatly changed during the past thirty-five years. For one thing, the population has nearly doubled. So has the number of houses. From what was originally but a small fishing village Brighton has grown to be one of the largest and most fashionable sea-side resorts in the kingdom, with a sea-frontage (including its western extension) of nearly four miles. The making of Brighton is popularly attributed to George the Fourth, who, when Prince of Wales, selected it as his marine residence, and built at a considerable expense the building known as the Pavilion, in which to-morrow's conference will be held. But I imagine that the proximity of Brighton to London has had quite as much to do with its advancement. It is only fifty miles, and since railroads have come in can be reached from the metropolis in but little over an hour. The excellent train-service tempts many city merchants to live here and go to and fro daily by train. Brighton, too, is a remarkably healthy place, though a casual visitor would be inclined to think the contrary must be the case, or so many doctors would not have been induced to settle here. The number of medical men who have pitched their tents here is indeed very large, even bearing in mind the teeming and ever-increasing population. In selecting Brighton as their place of abode, no doubt many of its medical residents have had in view their own health as well as that of their patients. There is generally a fresh sea-breeze to be had here, with plenty of sunshine lighting up the waves of what most visitors to Brighton call "a good bold sea." There is no shipping here, and the surrounding country is very bare. There is therefore some force in the satirical description of Brighton as presenting "a sea without ships, and a country without trees." The extent to which it is patronized by Londoners also caused it to be termed (by Thackeray) "London-super-Mare." Brighton flourishes, however, in spite of the gibes cast at it, and the number of palatial residences built upon its western shore furnishes an index to the extent to which it is patronized by the wealthier classes.

Some four years ago a great scare was created among Brightonians by the appearance in *The Lancet* of an article—or rather a series of articles, for the first one was very speedily followed by others—condemning the Brighton drainage. Here, as at most of our sea-side resorts, the sewage is conducted into the sea. It was asserted that the condition of the main sewer running along the Esplanade was far from satisfactory, that stagnation of sewage in it took place at certain states of the tide, and that sewer-air accumulated in it under pressure under a constant danger of being forced back into the houses. These allegations were denied by the Brighton authorities. Eminent sanitarians were appealed to on either side. The feeling in Brighton ran so high that the Town Council actually proposed to sue *The Lancet* for libel. Wiser counsels, however, prevailed and the law was not appealed to, but the local health authorities bestirred themselves to perfect as far as possible the system of sewerage. That the latter was so extremely bad as some thought could I think scarcely have been ever very seriously maintained when we consider the extraordinarily low death-rate of Brighton. The lat-

ter tended to show that—even granting that the Brighton sewerage was far from perfect in theory—at any rate it worked very well in practice. The ultimate result of the discussion has doubtless been beneficial, though Brighton undoubtedly suffered temporarily from the assault made upon its hygienic resources. I have heard the remark by a Brighton physician that the depression has been permanently felt, a view scarcely sustained by a glance at the crowded streets and Esplanade thronged with fashion.

To-morrow we meet in the Pavilion, a building interesting both in itself and in its associations. It was originally built by George the Fourth to serve as his marine royal residence. When built it was added to successively, then altered, and finally a good deal of it pulled down and rebuilt at an enormous cost. Concerning it Byron wrote:

> "Shut up—no, not the King, but the Pavilion,
> Or else 'twill cost us all another million."

After more than a million pounds had actually been spent upon it, it was finally abandoned as a royal residence and sold to the town for a twentieth of its cost. This was in 1850. It is now used partly as a museum and partly to hold various meetings in, for which its spacious rooms are well adapted. The building, as a whole, has rather a bizarre appearance, and has served as the butt of many wits. Externally, a mingled mass of minarets, cupolas, and turrets is seen; the whole of the interior is decorated in the Chinese style. A separate building, originally used as the Royal Stables, was in 1867, at a cost of £10,000, converted into an assembly room, now termed the Dome. The general meetings of the Association will be held in this building, and as it will hold nearly three thousand persons the accommodation will be more than ample for the scientists now *en route* for Brighton.

Although not actually the county town, Brighton is really the most important town in the county, and as such a few lines about its medical institutions, which are numerous, may interest even a transatlantic audience. Among these I must accord the place of honor to the Sussex County Hospital, as not only the largest and most important medical institution in Brighton, but also the oldest, having been founded in 1828. The building cost £10,000 originally, but numerous additions have been made to it from time to time. One wing of it was destroyed by fire in 1872, but this has since been restored. The hospital is situated at the extreme eastern end of the town, upon rising ground many feet above sea-level, and at some little distance from the sea, but commanding sea-views. At present it consists of a handsome building of four stories, with projecting wings, and more than fifty windows in front. There are about one hundred and seventy beds, and a large out-patient department. The wards are large and airy, some being about sixty feet long by about twenty feet wide, and with windows on three sides, thus securing thorough perflation. In some the centre was occupied by a large chimney-block, in which were placed two open fireplaces back to back, one thus serving to warm each half of the ward. Neatness and order seemed to be the rule throughout the hospital, and I was much struck with the business-like appearance of everything. From what I saw I should judge that a good deal of solid work is done within the four walls of the Sussex County Hospital. At the time of my visit several interesting cases were in the wards. One case made an impression on my mind not readily to be effaced. It was that of a young girl, of only sixteen years of age, who had been admitted for a tumor growing from the head of the humerus. This proved to be a myeloid sarcoma, and the limb was amputated through the shoulder-joint. There seemed for a time to be a fair promise of recovery, but the growth recurred in the stump, and had increased so rapidly that further interference was, at the time I saw her, obviously of no avail. The miserable expression of suffering and despair upon the countenance of the patient, as she sat up in bed with her eyes fixed upon the repulsive wound while it was being dressed, was most affecting even to a professional visitor. Other cases were more encouraging. I saw several cases of amputations and excisions which had done remarkably well. One was in an old woman, seventy-two years of age, who had had the right leg amputated in the lower third for an accident. Cellular inflammation had supervened and several collections of pus had had to be evacuated, but she was doing well when I saw her. A boy whose hip-joint was excised last autumn was getting about the ward on crutches, the limb which had been operated on being kept off the ground by a patten placed beneath the sound foot. He looked rosy and healthy, and there was not only a good deal of movement, owing to the formation of a false joint, but he was getting some control over the limb. Two would-be suicides were in one ward lying in adjoining beds. One had attempted to cut his throat, the other had favored oxalic acid, which he had swallowed to the extent (it was supposed) of an ounce and a half. Both were doing well.

Several eye cases were in the wards. One was of keratitis in a patient the subject of syphilis. Mercury had been administered to him, but without producing any effect. The dose was increased until he took three grains a day (each) of calomel and gray powder, besides having a drachm of mercurial ointment rubbed into him thrice daily. This produced a slight soreness of the gums and a mercurial erythematous rash suddenly appeared, but speedily subsided on the mercurial treatment being suspended for a couple of days. Another patient had had half her eye sliced away by a door latch, but was doing well. A cabman who had fallen off his box on to the wheel, with the result that a large section of his scalp was torn from its natural attachment and left hanging down over his eyes was progressing favorably, his temperature being normal and appetite good, although suppuration had occurred and drainage-tubes were still in. The impression produced upon my mind was that most operation cases did very well and wounds healed rapidly, and that, too, although the surgical staff are by no means unanimous in using antiseptics. Those of them who do use them seem generally to use carbolic acid as the antiseptic agent, and Lister's original system (spray, protective gauze-bandage, carbolic lotion) as the method of applying it. Among the cases I saw which had been treated without antiseptics was one of ovariotomy, which had been operated on nine days previously. Although peritonitis had ensued, with elevation of temperature, the patient had successfully battled through it, and was apparently on the highway to recovery. Total-abstinence principles did not seem much in favor at the hospital, for I understood that a good deal of alcohol was prescribed, though not as a mere matter of routine in every case.

I spent half an hour, not unprofitably, in visiting the hospital museum, which is located in an adjoining building. I saw here a remarkable specimen (skeleton) of mollities ossium, which was shown at the International Medical Congress in London in 1881. The specimen was rendered more interesting from the circumstance that not only the patient's history, but also that of his family, was given in the printed label affixed to the case. It appeared that the patient not only lived to nearly seventy, but also married and had several children, all of whom seem to have inherited the disease. One daughter is described as being constantly in the hospital with broken bones, and another died in early womanhood from the effects of the Cæsarean section. An interesting specimen was shown me of ante-flexion of the uterus, the existence of which has been denied. Only half the specimen is shown, the other half having been presented to the museum of St. Bartholomew's Hospital, London. I noted, also, in one glass case a series of sections of the ribs of insane persons, which were made some years

ago at a time when the frequent occurrence of fractured ribs among asylum patients was creating some comment. The preparations displayed certainly supported the view that the bones of lunatics acquire unusual fragility, for in all of them the compact bony structure had been almost wholly converted into cancellous bony tissue. Among the rarer specimens were also one of dislocation of one of the cervical vertebræ without any fracture, and a unique example of ureteric disease. Comparative anatomy was also not unrepresented. I observed a good series of equine vesical calculi, and a good many skeletons of various animals, including one of an apteryx, which, I was informed, had been presented from the Museum of the Royal College of Surgeons of England, by Professor Flower, in exchange for the head of a spotted New Zealander, of which the Sussex County Hospital was the fortunate possessor. The museum is altogether a worthy monument of the thirty years' labors of its indefatigable curator, Mr. N. P. Blaker.

Retracing my steps along the Eastern Road, I read with some amusement an inscription in a fly-proprietor's window informing me that "Mrs. Linsted's ointment cures all skin and eye diseases." This is placed almost within a stone's throw of the hospital gates. Farther on I pass the spacious Medical Mission Hall, at which out-patients are seen every morning.

I also paid a visit to a very useful institution, the Brighton and Hove Lying-in Institution, Hospital, and Dispensary for the Diseases of Women and Children. This is situated in West Street, only a few doors from the Esplanade, and commanding sea-views. The building is spacious and convenient. There is an extensive out-patient maternity department, but the wards of the hospital are open to receive cases of difficult labor. The wards were comparatively unoccupied at the time of my visit. I saw several cases of uterine displacement, one of cervical malignant disease, and one of pelvic cellulitis, in which an abscess had formed and burst externally near the umbilicus, leaving a very intractable sinus. Antiseptics are used in many cases, though not as a matter of rule-of-thumb in ordinary cases of delivery conducted at the patient's home. I learned that the number of cases of puerperal fever had lately been practically *nil*.

Passing up the steep ascent toward the railway station, I pass on my right an imposing edifice of classic type—the Sussex Eye Infirmary. Some ophthalmic cases of interest are to be shown here during the meeting, and a limited number of beds have been placed at the disposal of gentlemen bringing such patients from a distance, to accommodate them during their stay at Brighton. Such an arrangement will no doubt be very nice for the "interesting cases," who have travelled a good many miles, and very convenient and inexpensive for medical gentlemen bringing them, but what will the governors of the charity say to such a manner of disposing of their funds, admirable as it may be from a scientific stand-point? Adjoining the infirmary is, very appropriately, a depot for the sale of Moon's books for the blind. On the opposite side of the road is the Brighton Throat and Ear Dispensary which, albeit but an unpretentious structure externally, is manned by a staff of three surgeons, and has now been in existence for some years.

Deviating from the main road and making my way up a steep slope, a few minutes' walk brings me to the most ornamental medical institution in Brighton, the Alexandra Hospital for Sick Children. On my way I pass the old parish church, St. Nicholas', connected with which are many interesting mementos. One of these is the grave of Phœbe Hessel, of Stepney, who served many years in the Fifth Regiment of Foot as a private soldier, and received a bayonet wound in the arm at the battle of Fontenoy. Her sex was only accidentally discovered. She was pensioned by George IV., and died at Brighton in 1821, at the age of one hundred and eight years.

On arriving at the hospital I note that it is a structure of red brick, with terra-cotta dressings and mouldings, in the Queen Anne style, and stands in its own grounds of more than an acre. The site is elevated, and I may here parenthetically remark that Brighton is very hilly in parts. The hospital was started in a small way eighteen years ago, in the Western Road, and at first contained only two beds. It owes its life to the exertions of Dr. Taaffe, the present medical officer of health for Brighton, who was not only the founder but one of the active staff for many years, and under his auspices it reached its present degree of prosperity.

The present building was erected in 1880, and opened in 1881 by the Prince and Princess of Wales. On this occasion a gold key of the building was presented to the Prince of Wales by Dr. Taaffe, and the occasion was the first on which such a presentation was made. Golden trowels have frequently been presented when foundation-stones have been laid, but Brighton was the first to start the fashion of presenting a gold key; but having led the way, the precedent has always been followed since whenever a member of the royal family has opened a new building. The hospital contains four wards and can accommodate ninety patients. Nearly all have cross-ventilation and are warmed by central stoves, with flues running under the floors, which are concreted under the wooden flooring. Most of the wards are lined with artificial marble, thus rendering cleanliness easy and absorption of disease-germs impossible. There is a separate block in which out-patients are seen, and also a detached ward for isolating infectious cases. The total cost of the hospital was about twelve thousand pounds, an amount which cannot be deemed excessive, considering the size and beauty of the building and the excellence of the sanitary arrangements.

Brighton also boasts of a dental hospital, a homœopathic dispensary, and, at the extreme east of the town, on the cliff overlooking the sea, stands the Black Rock Convalescent Hospital.

ICE-CREAM POISONING.

To the Editor of The Medical Record.

Sir: In your issue of July 24th an article appears from the pen of Dr. P. A. Morrow, questioning the existence of tyrotoxicon in ice-cream, as lately reported by Dr. V. C. Vaughan, and assuming that the poisoning may be the so-called "vanillism" of the French authorities.

The remarkable coincidence of symptoms in cases of ice-cream poisoning seem to point to an identity between the poisons; this, on the one hand, might be considered a point in favor of "vanillism." If, however, we consider the small quantity of extract eaten with each dish of cream, either this extract, or the poisonous substance entering into it, must be ten times as active as strychnine, or the poison is due to something else. No doubt there are extracts unfit for use, from the fact of adulteration or the substitution of some inferior article resembling the true, but with a single teaspoonful to a gallon, or one to one and a half tablespoonful to five gallons of cream (figures given by an experienced confectioner), it is nonsensical to think of poisoning from such a source.

Assuming four to six ounces of cream to be given in each plate, there could not be more than two to three grains of an exceedingly dilute extract given to each person. Evidence is accumulating daily that there is a substance formed, of an alkaloidal nature, which is a most active poison. This substance is developed in milk, cream, meat, and various articles of food, and hot summer temperature, accompanied by certain atmospheric conditions, seems to favor this. The late case of poisoning from ice-cream in Coulterville, Ill., and the discovery of tyrotoxicon by Dr. Vaughan, confirm a theory I some time since advanced.

In the Coulterville case Dr. W. W. Kane has given the following as symptoms noted in the first patient:

"The patient was eight years of age, and when I saw her she was suffering with a slight chill which lasted perhaps fifteen minutes. The surface of her body was cold, circulation greatly depressed, pulse very rapid and almost imperceptible at the wrist. . . . While in the chill, and I am told before the chill, there was violent emesis and frequent and exhaustive discharges from the bowels. The depression and cold surface was followed very quickly by a raging fever which reached 104½° F. The patient suffered throughout with a most distracting frontal headache, which seemed to be most excruciating over the superciliary ridges. Violent paroxysmal cramp-like pains in the stomach and bowels was also a very characteristic phenomenon.

"One of my patients, when asked to describe the nature of the pain, said it came on suddenly, the degree of intensity gradually increasing as the bowel seemed to twist upon itself in the manner of a corkscrew, and as the bowel slowly relaxed itself so likewise the pain gradually subsided. The vomiting was very persistent, but in all cases under my observation this distressing symptom subsided, while the violent purgation continued and proved to be the most stubborn and intractable manifestation of the disease.

"At first the ejecta from the stomach, which consisted of the contents of this viscus, were thrown off without great effort of the patient, with the exception of two, whose emetic efforts were violent from the onset, the matter vomited being curd-milk tough as dough.

"After the evacuation of the stomach of its contents nausea still persisted, and the emetic efforts, which were associated with great retching, brought forth a very little greenish serous discharge, evidently containing bile.

"The discharge from the bowels was at first the natural contents, which changed very quickly to a green discharge which resembled very much pounded green grass held together with a slimy sero-mucous fluid. The passages from the bowels followed each other in quick succession, as often as every ten minutes, and at first possessed a very fetid odor, but in a very short time after the onset the stools were entirely void of the least color. In only three or four cases out of twenty-five did I notice a small amount of blood in streaks intermingled with the stools. Menstruation occurred in one patient twenty-one years of age who had only menstruated two weeks previous, and who stated she had always been regular and menstruated every four weeks prior to this period."

I have given Dr. Kane's letter in full, as I shall allude to it later.

The first case of ice-cream poisoning which came to my notice was in the summer of 1883.

On July 25, 1883, in Joliet, Ill., two hundred people were poisoned from eating ice-cream at a picnic.

The symptoms in the cases were almost identically the same as given above. Some of the patients did not recover fully for a week or more.

The cream was made of the best materials—fresh cream, milk, eggs, and corn-starch—and frozen in new tin-lined copper cans. The greatest care was observed in making it. The milk and cream were thoroughly boiled, I was told, but stood a short time before freezing.

As soon as partaken of, or shortly thereafter, symptoms of poisoning were shown, some persons coming down more rapidly than others, and a few, I was told, escaping altogether.

What cream remained—about three ounces—was collected and submitted to me for examination, as well as a batter partly filled with the flavoring, vanilla.

It was thought the cause of the poisoning lay in some mineral poison in the vanilla, but as I examined it carefully I found no evidence to sustain this. Thereupon I took some ten or fifteen drops of the flavoring extract myself, and felt no serious effect from it.

There was no evidence of the smallest possible quantity of mineral poison existing in the cream.

Previous to the examination for mineral poisons I had treated the cream with absolute alcohol, slightly acidified with dilute sulphuric acid. This alcoholic extract I examined carefully, by a method similar to that employed by Dr. Vaughan.

I found no evidence whatever of any alkaloid poison of vegetable origin. I succeeded, however, in separating a small quantity of a crystalline substance which, like Selmi's ptomaines, gave a cherry-red color with concentrated sulphuric acid, and had a reducing effect upon potassium dichromate.

This substance produced a stinging, benumbing sensation, when touched to the tongue.

I succeeded in separating a few needle-like crystals, which could only be seen by the aid of a microscope.

Owing to the small quantity of material with which I had to work, the physiological tests desired could not be made. However, a small quantity of the extractive matter, carefully neutralized and extracted with chloroform, after the evaporation of the chloroform, was given a mouse with some cheese, and death ensued in a short time thereafter.

In my report, which was published at the time, I pronounced the cause of the poisoning as due to a peculiar *ptomaines* produced by the incipient decomposition of the cream, favored by the existing atmospheric conditions and the high summer temperature at that time.

I merely give this as another fact in proof of the announcement of Dr. Vaughan in regard to tyrotoxicon in ice-cream, for I believe the substance I isolated is the same thing. That tyrotoxicon is an actual and not a hypothetical substance has been conclusively proven by the splendid work of Dr. Vaughan, and that it may also be, and often is, formed in ice-cream, milk, and articles of food containing milk, is evident.

Some people delight in clinging to obsolete things, like the Mexicans to the rude agricultural implements of their forefathers, and these same people guffaw at every new discovery, like the eminent Frenchman at Franklin's lightning-rods. But anything as conclusively demonstrated as the existence of *ptomaines* must be accepted.

It appears that ptomaines are formed in many articles of food of animal origin, and that the hot, moist atmosphere of the summer favors this. It is notable that cases of ice-cream and food poisoning occur oftener in the summer than at any other time of the year. Hence too much care cannot be exercised in the selection, preparation, and preservation of articles of food during this season.

The poison produced in food is evidently the product of some form of bacteria, the spores of which must be formed in the atmosphere; hence such articles of food as are the proper media for the propagation of these organisms should not be too freely or too long exposed.

The process by which *ptomaines* are formed commences very soon; often the animal is killed, or the milk or article of food is exposed to the atmosphere, and if the substance is once formed it is not easily dispersed or destroyed by any process except further decomposition. We see that the poison is not a very stable substance, but it is a very active substance.

Cooking of food may suffice to kill the bacteria and their spores, but it will not always suffice to dispel or destroy the poisonous ptomaines.

Unfortunately there is no known method at the present time whereby the people can detect the presence of this poisonous substance. Under these circumstances poisonous articles may get into the hands of the dealer and may be disposed of in perfect good faith. It is the duty, however, of every dealer to observe the best known precautions to avoid all such unfortunate occurrences, and thereby protect his patrons as well as himself.

CHARLES B. GIBSON,
College of Physicians and Surgeons.
CHICAGO, August 4, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 15 to August 21, 1886.

MAGRUDER, DAVID L., Lieutenant-Colonel. Promoted to Surgeon with rank of Colonel, vice Brown, retired. July 26, 1886.

ALEXANDER, CHARLES T., Major. Promoted to Surgeon with rank of Lieutenant-Colonel, vice Magruder, promoted. July 26, 1886.

CRONKHITE, HENRY M., Captain and Assistant Surgeon. Promoted to Surgeon with rank of Major, vice Alexander, promoted. July 26, 1886.

WALKER, FREEMAN V., of Georgia. Appointed Assistant Surgeon, vice Cronkhite, promoted. July 27, 1886.

BAILY, J. C., Major and Surgeon. Granted one month's leave of absence. S. O. 111, Division of the Atlantic, August 17, 1886.

BENTLEY, E., Major and Surgeon. Granted one month's leave of absence, and at its expiration to report for duty as Post Surgeon at Little Rock, Ark. S. O. 113, Division of the Atlantic, August 18, 1886.

TREMAINE, W. S., Major and Surgeon. Sick leave further extended six months. S. O. 187, A. G. O., August 13, 1886.

LORING, L. Y., Captain and Assistant Surgeon. Leave of absence granted him in S. O. 59, August 2, 1886, Division of the Pacific, extended two months on Surgeon's certificate of disability. S. O. 189, A. G. O., August 16, 1886.

TAYLOR, B. D., Captain and Assistant Surgeon. When relieved by Surgeon Bentley, to proceed to Jackson Barracks, La., and report for duty as Post Surgeon. S. O. 113, C. S., Division of the Atlantic.

HOPKINS, WILLIAM E., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Angel Island, Cal. S. O. 61, Division of the Pacific, August 6, 1886.

BORDEN, WILLIAM C., Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Bridger, Wyo., during absence of Assistant Surgeon Crampton. S. O. 100, Department of the Platte, August 9, 1886.

WALES, PHILIP G., Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Columbia, and to report in person at Headquarters Division of the Pacific for further orders. S. O. 62, Division of the Pacific, August 9, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Plattsburg Barracks, N. Y. S. O. 113, Division of the Atlantic, August 18, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended August 21, 1886.

STONE, E. P. Commissioned an Assistant Surgeon in the Navy, August 5, 1886.

WENTWORTH, A. R., Assistant Surgeon. Ordered to temporary duty, Navy Yard, League Island, Pa.

LIPPINCOTT, G. C., Passed Assistant Surgeon. Ordered to Annapolis, Md., for temporary duty, member Medical Examining Board.

Two heads with but a single thought—A consultation.
Two hearts that beat as one—A mammalian.

New Instruments.

A URINAL FOR CASES OF VESICO-VAGINAL FISTULA.

BY JOHN C. JAY, JR., M.D.,
NEW YORK.

ENDEAVORING to relieve the wretched condition of a patient, aged sixty, to whom cystotomy through the anterior vaginal wall had been done for the relief of cystitis, and in whose case it was not deemed expedient to close the fistula, owing to the pathological condition of the urine, I tried every kind of urinal for females that could be heard of, but they one and all failed, it being impossible to apply any apparatus to the vulva and maintain a tight joint.

It occurred to me to combine a urinal with a pessary. This idea, from the first trial, proved more or less successful. I had urinals attached to several kinds of pessaries, but that which gave the greatest, and I may say perfect, success was the elastic-ring pessary. One of these of the proper size was taken to the rubber manufactory, and upon it was built the urinal which is shown in the cut. There are no joints. There is no metal to corrode. A tube-compressor slipped upon the exit-tube gives the patient complete control.

This urinal has now been worn by my patient for four months, and during that time she has not wet the clothing or bed. In her case the ring-pressure has sufficed to maintain the weight of the urinal and the contained urine. At night, however, when a large amount of urine is allowed to collect, when about to rise she is careful to take the weight off the ring by supporting the bag with the hand until it is emptied. In a younger and more active person the weight of the urinal should be sustained by a knitted purse, surrounding the lower half of the urinal and attached by tapes to the waistband. My patient has several of these urinals, and a clean one is introduced every ten days. While in her daily sitz-bath she slips the nozzle of a syringe into the exit-tube and fills the urinal repeatedly with warm soap-suds, and thus maintains cleanliness of the apparatus and vagina.

17 WEST FORTY-SIXTH STREET.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 21, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	27	6
Scarlet fever	14	5
Cerebro-spinal meningitis	6	6
Measles	27	11
Diphtheria	42	22
Small-pox	0	0

AN ANATOMICAL INSTITUTE.—The municipal authorities of Nancy, France, have voted a sum of 300,000 francs, to be added to an appropriation of 500,000 francs by the government, for the creation of anatomical and chemical institutes in that city.

THE TREATMENT OF RHUS POISONING. — Dr. E. Mammen, of Bloomington, Ill., writes: "I have recently treated two cases of poisoning by *Rhus venenata*; on the following simple plan. A four per cent. solution of carbolic acid was used as a lotion, and afterward the following ointment: ℞. Acidi carbolici, gr. x.; acidi boracici pulv., ʒ ij.; vaseline, ʒ j.; applied two or three times a day. The dermatitis subsided promptly. One case was quite severe. The hands, arms, penis, scrotum, and anterior parts of the abdomen were severely involved. The pain and irritation at once subsided under the application, and my patient was well in a few days."

A PHYSICIAN'S INTERESTS.—Dr. Syme says: "There are three ways you may try, there are three interests you have to consider, and it will depend upon the order in which you consider them how success will be measured out to you. The first interest is your own, and it may seem to you the greatest, while it is really the last. The second interest is truly greater, for it is the interest of your professional brothers; but the last is the greatest of all, for it is the interest of your patient, and with that is eternally related the interest of the art you practise."

OVARIOTOMY AND DISEASE OF THE FALLOPIAN TUBES. Dr. Mary Dixon Jones, of Brooklyn, writes: "Spencer Wells is often quoted as having said 'that in not one case among his one thousand ovariotomies had he perceived any sign of disease in the tubes.' Last Saturday, from a woman twenty years of age, I removed two ovarian cysts. The right ovary was converted into a cyst, the size of a small orange; the *tube* was very much hypertrophied, in a high state of congestion and inflammation, and was spread out flat upon the ovary, its posterior surface entirely adherent throughout its whole extent; apparently the tube was incorporated with the walls of the cyst. The left ovary was also converted into a cyst, not as large as the right, and to it was adherent, in a similar manner, the left Fallopian tube, which, like the right tube, was hypertrophied and in a condition of profound disease. Both tubes seemed entirely impervious. I have been more surprised at the observation of Sir Spencer Wells because all the cases I have had of Tait's operation, or of cystoma, while the ovaries were more or less profoundly affected, yet, in each case, the tubes were diseased, and in some, greater pathological changes had taken place in the tubes than in the ovaries. When we consider that the noxious material, or infecting element, must pass through the tubes to the ovaries, is it not reasonable to suppose that they, the tubes, should be first and most frequently affected, though their pathological structure may not show *ostensibly* so great organic changes as we may find in the ovaries? Again, when we think that much of the so-called cellulitis is really tubal disease, and then consider how very frequent is this supposed cellulitis, we may have some idea of the frequency of disease of the tubes, or salpingitis. The young woman from whom I removed the cystoma, three days ago (the patient is doing remarkably well; her temperature the morning before the operation was 99¼°, the day after the operation it was 100⅕°), has been married two years—no children. Externally she had all the appearance of health—good color, well developed, etc.—but since early menstrual life she has complained of great distress in the pelvis, at times very severe. No doubt she had repeated attacks of salpingitis, and these repeated attacks changed the structure of the tubes and caused the inflammatory adhesions to the ovary. There were many peritoneal adhesions, but they could not be severed; to have attempted to have severed the adhesions between the tubes and the ovaries would have been complete destruction of both structures. I must think that in many of Sir Spencer Wells' cases there were diseased tubes; but his mind was so directed to, and absorbed in, ovarian troubles as to gross results that he did not consider minor pathological conditions or microscopical changes. But Sir Spencer Wells does not say there were no diseased tubes in his one thousand ovariotomies, but with the modesty of a great scientific man he said, 'in not one of the cases did he *perceive* any sign of disease of the tubes.' Could his cases be reseen, and especially seen in the light of modern microscopical science, I believe it would be found that many had diseased tubes."

SYSTEM IN RECORDING THE RESULTS OF READING.—Dr. Enos T. Blackwell, of Cedarville, N. J., writes: "Every reader, however tenacious his memory, must often experience an inability to recall at will the special facts gathered in his examination of the periodical literature of the day. Particularly is this true of the busy physician, who snatches his information at detached periods, and while his mind is crowded with the details of his daily practice. If he has no settled plan of recording the data culled from many sources, his time will often be vainly spent in tracing the missing memoranda that he should be able to find and use in a moment. It is to afford aid in this regard that note-taking is resorted to; but this avails little, unless it be associated with some system of easy reference. The 'Index Rerum,' devised by Dr. Todd, fulfils this want exactly, and it is doubtless familiar to many physicians. As it cannot be denied that many remedies are used in an empirical way, it need not wound one's self-love to have at hand a well-arranged index of them, and of the diseases in which they have been successfully used by others. I make some extracts from my own gleanings to illustrate the proposition. We will suppose that a practitioner has a case of mammary engorgement, which threatens to become a breast abscess. Should he not feel fully armed to meet the trouble, he may consult his index for the treatment found effectual by others. On the page marked *Ae*, I find recorded the following: Abscess, mammary—adhesive plaster in, *M. and S. Reporter*, xli., 189; ice in, *Phil. Med. Times*, xii., 214; prevention by fomenting with ammon. carb. in hot water (ʒ j. to Oj.), *M. and S. Reporter*, liv., 153. Puerperal eclampsia is one of those terrible forms of disease which demands the instant adoption of bold and effective measures. If the physician has not a well-grounded faith in a method of treatment of his own, a few minutes' time avails to refresh his memory with the experience of others. My gatherings embrace the following notes, found on page *Ea*: Eclampsia, puerperal—pilocarpine in (⅛ gr. hypodermically), *Phil. Med. Times*, ix., 404; chloroform in, *M. and S. Reporter*, xlii., 233; albuminous, veratrum and diuretics in, *ibid.*, xlii., 280; uræmic, jaborandi and benzoic acid in, *ibid.*, xlii., 821; septicæmic, phenic acid (hypodermically) in, *ibid.*, xlviii., 519; hot pack in (40° to 50° C.), *Med. Bulletin*, v., 107. In order to be sure to find at once what is sought, it is well to record the same data under different headings, *e.g.*, morning-sickness may be noted under the heading of vomiting. In this way the catalogue may be gone through, and something useful be found to meet almost any case that may present itself—information which is the record of researches well tested and found reliable; as also of those which are more recent, embodying the latest suggestions and discoveries of illustrious scientists and practical physicians of extended observation and experience."

HOMO CAUDATUS.—Dr. Elisseyeff reported the following case at the meeting of Russian physicians held in St. Petersburg in April (*Vratch*, No. 16, 1886). A woman, twenty-three years of age, consulted him on account of a projection in the coccygeal region, which had become very painful from the irritation of a bandage which she had used to prevent its growth. The tail was nearly two inches long and over half an inch broad, and was composed of two vertebral segments covered by fat and hairy integument.

CHRONIC DIARRHŒA is said to be speedily controlled in many cases by a saturated solution of common salt in cider vinegar, the dose being a teaspoonful three or four times a day.

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ERYTHANTHEMA SYPHILITICUM.[1]

BY EDWARD BENNET BRONSON, M.D.,

PROFESSOR OF DERMATOLOGY IN THE NEW YORK POLYCLINIC; PHYSICIAN TO CHARITY HOSPITAL.

A CASE of syphilis recently came under my care which presented features of extraordinary interest to me, not only in that the symptoms were of an unusual character, but in that they represented a phase of syphilitic symptomatology whose etiological bearings afford an interesting subject of study.

The case was the following:

B. G——, aged forty, born in Germany, furrier by trade, entered Charity Hospital, May 4, 1886, suffering with an acute inflammatory eruption of the face, hands, and feet. Upon the face a sharply circumscribed erythema covered nearly its entire area, and extended over the ears and somewhat upon the scalp and neck. The surface was thickly studded with a vesiculo-pustular eruption, which was especially abundant upon the forehead, cheeks, and chin. The vesico-pustules were pretty uniformly the size of peas. Both palms and the inner surfaces of the fingers were covered with a deep-red erythema, which was sharply limited at the borders. All the nails of both hands showed evidence of disease. They were lustreless, rough, rugose, striated, and split or jagged at the ends. One (the ring-finger of the right hand) showed some suppuration in its wall. Upon the soles were erythematous patches similar in color to those on the palms, but of more limited extent. There were three or four nummular spots on each foot, situated chiefly at the inner and central portions of the sole. The toe-nails were unaffected. Scattered over the thighs and legs were a number of small erythematous spots, in the centre of some of which were little pustules. When I first saw the patient, three days after his admission to the hospital, the face was much swollen, most of the pustules had collapsed, run together, and were converted into an exuding, whitish, somewhat elevated, diphtheroid surface, with a very copious, purulent, foul-smelling discharge; while upon the nape of the neck there had appeared a new eruption, similar to that at first observed upon the face. It was a large, sharply circumscribed patch of deep crimson erythema, with numerous white, pea-sized, globular, apparently superficial, vesico-pustules scattered over it. The appearance was like that of a burn or scald of the second grade. There was no marked infiltration of the skin, apparently, other than would accompany any superficial acute dermatitis. Upon the hands and fingers the eruption had become more dusky, almost livid in hue, and the horny layer of the epidermis had begun to be elevated in large, loose, thick lamellar sheets, still attached at the edges, and containing no fluid exudation beneath. Desquamation had not begun upon the feet, and did not for some weeks afterward. On various parts of the body, particularly on the thighs and anterior part of the body, was a disseminated, fine pustular eruption, situated about the hair-follicles. At the bases of the pustules there was no noticeable infiltration. Here and there, especially upon the arms, were little dark-red erythematous spots, not raised above the *niveau*, and not perceptible to the touch. There were no lesions upon visible mucous membranes. Aside from general debility and marked anorexia there was little manifest disturbance of the general health. There was no pronounced fever. The eruptions all appeared to be of an irritative and decidedly inflammatory character. That upon the face and neck suggested nothing so much as the *hydroa bulleux* of Bazin.

On the palms and soles the eruption, while partaking of the erythematous character of that upon the head, wholly lacked its disposition to fluid exudation. At this stage of the disease the diagnosis was exceedingly obscure. Its multiform lesions suggested analogies with those peculiar eruptions that have been described by Bazin and Tilbury Fox under the name of *hydroa*, and by Duhring under the term *dermatitis herpetiformis*. The previous history of the case was not very satisfactory. The patient stated that the eruption on his face had existed for several weeks prior to entering the hospital, and that there had been recurrent attacks upon various parts of the body for the past six or seven months. He is married and has had twelve children, eight of which are living and all healthy, including the last born, which is two years of age. The wife shows no sign of disease. His former physician, Dr. Louis Fischer, whom I saw subsequently, informed me that he had treated the patient during the past two or three years for several attacks of eruption upon the skin. The first was a papular exanthem upon the body. This disappeared, and some months later there was a vesicular eruption about the anus, said to be of an herpetic character. It extended about two inches on either side of the anus. The efflorescences occurred in clusters. It gradually passed away and was followed, at various intervals, by other eruptions, either papular or pustular, on different parts of the body. These eruptions were regarded as syphilitic, and always yielded to antisyphilitic treatment. The last time Dr. Fischer saw the patient was about a month before the latter's admission to the hospital, when he was just recovering from an itchy pustular eruption on the scalp and forehead. It dried up with the formation of crusts and scales. Dr. Fischer had never observed any cutaneous affection of the hands or nails.

When I first saw the patient there was not a single lesion that could be regarded as clearly syphilitic. As the disease progressed, however, some important modifications were noted in its appearance. The diphtheroid patches upon the face continued to discharge purulent and very offensive matter in copious quantity for several days, during which time the face remained much swollen. Then, as the discharge became less and the swelling subsided, hyperplastic growths made their appearance. In ten days the secretion had become slight, but the affected regions of the face and neck were covered with prominent warty elevations. Upon the bearded parts they were uniformly distributed, mammillated or papilliform, and closely set together. The red prominences projecting above the purulent matter that occupied the sulci between them roughly suggested the appearance of raspberries and cream. On the forehead and upper parts of the cheeks the growths were smoother, and occurred in circumscribed, round, or oval patches of nummular size. Upon the back of the neck the warts, which were mostly discrete, whitish, and of about the size of large peas, but with flattened surfaces, resembled exactly *condylomata lata* as they occur about the genitals.

[1] Read before the American Dermatological Association, August 25, 1886.

They occupied only the central portions of the erythematous patch. These vegetating growths were produced within a week from the first appearance here of the pustular eruption. Those upon the neck lasted ten days or a fortnight and then rapidly disappeared, apparently under the influence of a local application of a solution of bichloride of mercury (grs. ij.: ʒ j.). The vegetations upon the face were more persistent. Surrounding the growths, especially upon the forehead, and also those on the back of the neck, the skin over the areas corresponding to the original erythema was of a dusky-red color, with somewhat of a coppery tint, with sharply defined borders, which gradually became more and more elevated and rounded with an increasing infiltration. In the third week following admission to the hospital two red eroded spots, with slightly grayish centres, appeared upon the lower lips. They were of about the size of peas, and looked as though they might be erosions left by ruptured bullæ. In the course of a week or ten days their bases had become so infiltrated as to produce an elevation of a line or two above the surface. They were not unlike mucous patches. In the mouth were no lesions whatever. The orifices of the nares were much occluded by the vegetations and thickening of the skin, so as to interfere with nasal respiration, producing an effect like snuffles in a syphilitic infant.

Certain changes were noted also in the eruption on the body. It became more papular in character, the papules gradually increasing in size. May 17th, "an abundant crop of small papules and pustules, each one occupying a follicle," was observed "on the back, especially in the scapular region." On the back of the shoulders and arms they occurred "in groups of fine papules closely clustered together, resembling a miliary syphilide both in arrangement and color." On the 25th there were a number of papular tubercles on the back and arms, some the size of peas and some even larger, while others were miliary. Some of the papules showed slight desquamation in the centre, where they were somewhat depressed, especially the larger ones, a few of which had little crusts in the centre with an elevated rim of infiltration outside. The pustules had all disappeared. May 31st, the eruptions were everywhere subsiding. The papules and tubercles that were upon the back had left brown pigment stains. June 7th, the condyloma-like growths had disappeared from the nape, leaving dark-colored spots, though the brownish-red discoloration, with its gyrate infiltrated borders, still remained both in this situation and upon the forehead. Upon the upper parts of the face the nummular hyperplastic growths were yet prominent, of irregular oval outlines, generally smooth, though somewhat lobulated, of a paler color than those lower down, and free from secretion. The epidermis over them appeared to be intact. Upon the bearded portions the growths had the mammillated appearance described above, with some purulent secretion. Here and there on the face, neck, and other regions were to be seen a few vesicular or vesiculo-pustular efflorescences. The palms had become smooth, desquamation having ceased, but were still red and without perceptible infiltration. The nails showed little change. The patient's general condition was fairly good. Two weeks later the patient insisted on going out and received his discharge, promising to come and see me at my office. During all this time, notwithstanding so many of the features of the disease were strongly indicative of syphilis, no antisyphilitic treatment was prescribed. The patient appeared to be doing quite well under tonics and regimen, and at the time he left the hospital all the cutaneous affections seemed to be making fair progress toward recovery.

June 18th, the patient came to my office with some relapsing efflorescences upon the face, especially on the forehead and cheeks, and mostly situated upon the hyperplastic growths which had not yet disappeared. The efflorescences were papular in character, of a pale red color, with a certain waxy look, and occurred in groups of curvilinear, crescentic, annular, or orbicular shape. The chin and lower part of the cheeks were still warty and looked congested, as though *the process were about to become more active.* Upon the palms, which remained red, were several circular defects in the horny layer of the epidermis, with a loose fringe of cuticle surrounding them, apparently the remains of syphilitic papules. A few days later the papules on the face had increased, and a pretty abundant papular eruption had reappeared upon the back. There were two places where large papules had been excised two or three weeks before, for the purpose of microscopic examination (which showed the usual infiltration with granulation-cells of syphilitic lesions). Little black crusts remained at these places, and each was surrounded by an elevated rim of infiltration. On the legs were a number of papules covered by silvery scales (psoriasis syphilitica). The patient looked feeble and anæmic, and complained of weakness. Daily mercurial inunctions were then for the first time ordered, and black wash as an application for the face. Five days later a decided improvement was noted, which continued rapid during the succeeding fortnight. The papular eruptions subsided, and also the vegetations; the latter, as they disappeared, left little pit-like depressions at the sites of the hair-follicles. Finally, only a few rough, horny spots were left here and there on the cheeks and chin, and they also soon vanished. There remained a dirty-brown staining of the skin over the forehead and nape for a considerable time after. July 26th, the patient was comparatively free from syphilitic manifestations. The hyperplastic growths had all gone, as well as the papular eruption, and the nails near their matrices appeared to be growing well. The patient complained of "piles," and on examination a fleshy excrescence was found projecting from the anus, of about the size of a large bean, and covered with a mass of filiform warts. Similar warts, occurring in little tufts, were scattered here and there over the margins of the anus. They were all apparently of the nature of condylomata acuminata, and yielded readily to treatment.

The vegetating lesions upon the face and neck in the above case did not correspond to any ordinary form of vegetating syphilide. In appearance, though not in their mode of development, they resembled the *condylomata* (both *lata* and *acuminata*) that occur in moist situations, as about the anus and genitals. They differed from the so-called *frambœsia syphilitica* (*syphilis cutanea vegetans*) in that the latter is usually a product of more gradual growth and is generally preceded by ulcerative or other well-marked lesions of syphilis. In their manner of development they suggested the growths in the "herpes vegetans" of Auspitz,[1] and the "pemphigus vegetans" of Neumann.[2] In Alibert's description of the case of Georges Bartos I find some points of striking resemblance to the case detailed above, so far at least as the vegetating lesions are concerned, except that in the former the growth would seem to have been more exuberant. Alibert called the disease "mycosis framboisé." There are, doubtless, various diseases of the skin which may be attended with papillomatous or warty outgrowths. Under just what conditions they may arise is an inquiry upon which I shall not attempt to enter. To my present purpose this particular feature in the above case, namely, the production of vegetations, appears to me less important than the inflammatory affection that immediately preceded it. Was this affection a manifestation of the general syphilis from which the patient was presumed to be suffering? or was it merely an intercurrent affection?

That my patient had syphilis does not, it seems to me, admit of a doubt. Furthermore, the character and distribution of the lesions would indicate a syphilis of not long standing. Whether the first eruptions observed by Dr. Fischer were syphilitic or not, it is difficult to say. A

[1] Archiv für Derm. u. Syph., 1869, p. 246.
[2] Vierteljahrssch. f. Derm. u. Syph., 1886, p. 157.

healthy child, two years of age, affords pretty good presumptive evidence that the disease was contracted at least not much over two years ago, corroborating the evidence of the local lesions. But, on the other hand, none of the symptoms presented by the patient when he was first seen by me, could be regarded as having any of the ordinary characters of syphilitic manifestations, unless it be the condition of the finger-nails, and even this might be taken for a keratosis due to some other than a specific cause. The inflammatory lesions of the head, hands, and feet were primarily erythematous, but with that polymorphous character which is expressed in the term *erythanthema*, as first employed by Auspitz. Erythanthema is a form of cutaneous eruption of which the fundamental condition or form of activity is an erythema, which, in its subsequent course, may be modified by a great variety of local efflorescences—vesicles, pustules, papules, wheals, or other so-called primary lesions. It embraces, but is a little more comprehensive than, the *erythema multiforme* of Hebra. It may be incidental to, or symptomatic of, various morbid conditions. When not obviously symptomatic of any clearly recognized systemic disease, it is called "idiopathic" or "essential," rather, it must be confessed, for the sake of convenience than with a view to absolute scientific precision. Sometimes the eruption is the expression of a general toxic condition, or again of a local nerve (neuritic) disturbance. May such an exanthem be a result of syphilis, and if so, in what sense? Is it a direct manifestation of the disease, in the same manner as are the commonly recognized syphilodermata, or is it only a secondary, an incidental and accidental effect of the syphilis?

That the erythanthema (for so I would characterize it) in G——'s case was in some manner due to the syphilis may, I think, be inferred from the fact that it was so intimately associated with an outbreak of manifestations which were undoubtedly syphilitic in character; and not only was it directly followed by such manifestations, but the preliminary erythematous exanthem was succeeded *in situ* by lesions which were pretty distinctly syphilitic. The vegetations upon the face and neck, except as they simulated (especially in the latter situation) condylomata lata, may have expressed only certain peculiarities in the nature of the irritation, or that of the tissues affected. But the fact that the erythanthema was followed by a general eruption of miliary and lenticular papules over the body, the occurrence of circumscribed coppery infiltrations in the erythematous patches themselves, together with the rapid way in which these later lesions, as well as the vegetations, yielded to the topical and internal use of mercurials, renders it to my mind extremely probable that between the preliminary erythanthema and the syphilis there was a definite etiological connection.

Moreover, the existence of such a connection gathers probability in view of certain other cases that may be cited. With some hesitation I refer, first of all, to the case of the syphilitic roseola. The precise etiological position of this exanthem has never been fully determined; whether it is of the same nature as the succeeding syphilides, or is merely an expression of reflex sympathetic irritation, and more nearly related to certain of the toxic exanthems. To be sure, in certain of the efflorescences granulation-cells have been found effused along the blood-vessels, but, if I mistake not, it was particularly in those lesions known as papulo-erythematous. At all events, this eruption differs entirely in its course and general characters from the papular syphilides which follow it. As in the case of the erythanthema above described, the erythematous or roseolous lesions may gradually be transformed into well-marked infiltrations, the erythematous efflorescences turning into syphilitic papules.

It is stated by Hebra that a universal erythema papulatum may occur as *prodromal exanthem* of *syphilis bullosa* and *ulcerosa*. Neumann reports the case of a man[1] whose back was covered with groups of syphilitic papules, who at the same time had repeated attacks of *erythema* iris of the palm. He had also observed erythema iris occur as the initial stage of syphilitic pemphigus neonatorum. The coincidence of erythema with syphilis had also been remarked by Danielssen and Lipp. According to Lipp, those cases of erythema that occurred in connection with syphilis were especially severe or long continued. Again, in hereditary syphilis it is not uncommon to see patches of erythema precede the eruption of frank characteristic efflorescences of syphilis. To this preliminary eruption the French have given the name *érythème précurseur*. In the palms and soles the eruption often consists of a diffuse, coppery redness, which is followed by desquamation in lamellæ, not unlike what occurred in G——'s case.

Mauriac has described, under the name *érythème noueux syphilitique*, certain eruptions occurring at an early stage of syphilis, of a circumscribed erythematous character, differing totally in their clinical appearance from the commonly recognized forms of syphilitic exanthemata, and bearing the closest resemblance to *erythema nodosum*. They are attended with localized pain, and occupy the usual seats of the disease they simulate. The frequency with which he has met with this form of eruption in syphilitic patients, and the fact that in the course of their resolution the efflorescences often form movable, subcutaneous tumors detached from the skin—as indicating a gumma-like infiltration undergoing resorption—are the reasons for Mauriac's regarding these affections as true products of syphilis. The same authority also describes subcutaneous infiltrated plaques, nodosities, and tumors of an indolent character, some of which after a time show fluctuation and then undergo resorption; others go on to rapid suppuration and ulcerate, and of these latter some show a markedly intractable and malignant character.[2]

Within the past eighteen months I have met with three cases of what might be termed syphilitic erythema nodosum, and with one of them were associated the characters of the malignant form described by Mauriac.

The first case was that of Henry G——, a young man twenty years of age, of delicate build and appearance, who entered Charity Hospital, April 12, 1886, with an indurated sore on the penis, a maculo-papular syphilide on the body, and angina. About a month later, in connection with a pustulo-crustaceous eruption of the face, and a papulo-pustular syphilide on the body, the patient began to complain of severe pain and swelling in the right foot. Later the swelling and pain disappeared from the foot and reappeared in the knee. These swellings, it is recorded, would often appear and completely disappear within an hour. On June 24th two or three deep-seated infiltrated nodules were observed on the outside of the legs, near the head of the fibula. They were about the size of filberts, of a rather bright red color, and, in general appearance, were not unlike the lesions of *erythema nodosum*. A few days later similar lesions began to appear in other situations on the lower extremities; two on the outer side of the right thigh, at about its middle; two on the left thigh, just behind the trochanter major; one at the middle and outer side of the left leg; one behind the right trochanter, and one just below the lower third and over the crest of the left tibia. These lesions were attended with but little pain. A few days after, and before the lesions had disappeared, the patient left the hospital.

The second case, Mary H——, aged twenty-three, was

[1] Lehrbuch der Hautkrankheiten, p. 161. Wien, 1880.

[2] It was not until after the completion of this paper that my attention was called to an article by Finger, entitled "Ueber die Coexistenz von Erythemen mit Syphilis, in Allg. Wien. med. Zeitung, 1882, p. 261. Finger reports 9 cases of erythema multiforme and erythema nodosum, occurring coincidently with syphilis. The cases were divided as follows: Of 240 syphilitic men, 1 had erythema nodosum, and 1 erythema multiforme; of 105 syphilitic women, 5 had erythema nodosum, and 2 erythema multiforme, showing a much greater liability to this association in women than in men. The writer maintains that the coincidence is not purely accidental, but arises from the fact that conditions prevail in syphilis which favor the development of erythemata.

admitted to Charity Hospital April 19, 1886. She had previously been an inmate a year before with chancre, followed by secondary syphilis. At the time of the last admission she had a papular syphilitic eruption, chiefly upon the face, and complained of much pain in the clavicles, sternum, and tibiæ, mostly at night. These pains continued severe in spite of treatment, and in June became very distressing, especially in the legs. The patient was anæmic and cachectic looking. An ulcerating lesion appeared upon the palpebral conjunctiva of the left eye, attended with considerable conjunctivitis. There appeared about this time two red, circumscribed swellings on the outer aspect of the left leg, just above the malleolus, which were exquisitely sensitive to the touch and the seat of intense pain, commencing in the latter part of the day and continuing a good portion of the night. They were not connected with the bone, but evidently involved the skin and subcutaneous tissue. The largest occupied about the area of an English walnut; the other was perhaps half as large. They did not disappear readily under treatment, either by mercurials or by the iodide of potassium, but continued for a fortnight or more, and then rather suddenly subsided, together with the pain. The latter, however, returned again, and was only relieved by rapidly passing a Paquelin cautery over the affected surface.

The third case was that of a female patient, fifty-two years of age, Minna S——, who came to me at the Polyclinic. I saw her first in November, 1885. She then had a universal, very abundant syphilide, made up of large lenticular papules. There was also some angina. The case was evidently a recent one. As to the origin and inception of the disease little could be learned. An examination of the genitals was not consented to. The patient stated that she had first noticed an eruption the month previous, when she applied to her family physician, who prescribed mercury. She was married, and the mother of several healthy children, but has borne none for a number of years. The husband was not examined. The patient's general condition was considerably affected by the disease, which had the marks of a severe type. The eruption, however, yielded pretty readily to mercurial inunctions. Later, deep ulcerations made their appearance low down in the fauces, on either side, but healed after thorough cauterization with nitric acid. Three or four months after the first visit the patient came complaining of very severe pains in the legs. On pushing down her stockings an eruption was displayed that at a glance could not be distinguished from the most typical *erythema nodosum*. In all there were five or six nodes; one large one (about the size of an English walnut) on the outer side, and at about the middle of the right leg; another just opposite, and one lower down on the inner side. On the left leg there was one at the lower third, on the outer and posterior aspect, and another prominent one on the inside, just back of the tibia. In size they varied from that of an English walnut to that of a filbert, were considerably elevated above the *niveau*, softish to the touch, and toward their centres of a violaceous hue, with deep-red color outside. Except for the unusual degree of pain and the very exquisite tenderness, the diagnosis *erythema nodosum* would doubtless have been made without hesitation. They proved rebellious to treatment, and remained stationary for about a fortnight, during which time the pains were distressing. Meantime a certain alteration in appearance was noted in one or two of the lesions. The centres became paler, of an ashy hue, as though ischæmic. No distinct fluctuation could be felt, but the extreme tenderness prevented thorough palpation. After a time ulceration took place, and deep, excavated, sinuous sores were produced, which were a month or two in healing. When last seen (July 10th) the patient was in a fair state of health, all manifestations of the disease having disappeared, excepting a slight ulcer, which had recently broken out again in the cicatrix of one of the old sores.

These cases of erythema nodosum, together with the other erythematoid eruptions previously referred to, serve to show that various forms of erythanthema may be associated with syphilis in such a manner as to imply some sort of etiological connection. Certain peculiar modifications in their form or clinical course usually distinguish them more or less from the corresponding simple eruptions, and this, together with the fact that they often coincide in their appearance with, or are closely followed by, manifestations that are unquestionably syphilitic, would indicate that they and these latter manifestations are both due to syphilis as a common cause. Admitting then, as I think we may, that between the syphilis and the symptoms we are discussing, the relation of cause and effect does exist, that it is not merely a case of accidental coincidence, are we justified in regarding these irregular manifestations as symptoms of syphilis in the same sense as the regular and more typical syphilodermata? But first we should define what is meant by "syphilodermata."

Loosely speaking, a syphiloderm, a cutaneous syphilide, may be defined as any cutaneous affection due to syphilis; but in a stricter, and, as I think, more proper sense, as well as in the very common acceptation of the term, it is a cutaneous affection which is pathognomonic of syphilis; an affection which only syphilis can produce. It is characterized, I believe, in every case by a peculiar modification of structure, and a special course of evolution and involution. Everywhere in all the specific eruptions we have neoplastic growth, a growth of the nature of the granulomata, in which the cells have but a brief life history, and their early decay is the cause of the varying phases in the course of each efflorescence which constitute one of its chief characteristics. From the initial lesion to the gummata the prime features in the pathology are essentially the same: a local focus of irritation attended with the production of granulation-cells destined to rapid decay. As the type of all syphilodermata, may be taken that commonest form which is intermediate between the initial sclerosis and the gumma, to wit, the syphilitic papule. Whatever has not the essential character of the papule is not, strictly speaking, a syphilide. In a word, the cardinal feature of all syphilodermata is the specific infiltration. Upon the amount and distribution of this infiltration, the rapidity of its development and involution, and the degree and phases of the inflammatory reaction that attends it, depend all the multitudinous forms that syphilodermata may assume.

But, as is well known, many cutaneous or other symptoms arise in the course of, and are in one way or another due to, syphilis, which cannot be included in the category of infiltrations. Some of these are almost constant and more or less characteristic, others are merely occasional and accidental. In some the etiology is obscure. Thus the so-called *pigmentary syphilide* (a term to which, however, I would take exception) may be sequellar to an antecedent roseolar or papular syphilide, or it may be the expression of some remote sympathetic irritation, perhaps in a manner analogous to that of the common cloasmata. In any event, it would scarcely be regarded in the same sense a direct manifestation of the disease as is the syphilitic papular exanthem. Again, the purpura which sometimes occurs in syphilitic patients, either in a simple form or as a hemorrhagic complication of a specific eruption, is a symptom in nowise pathognomonic, but is probably due to cachectic, toxic, or neurotic conditions, which may be incidental to the specific disease, but are not peculiar to it. Similarly with regard to the pallor that many syphilitic patients exhibit.

But we may go a step further in limiting the definition of the true syphilide. Wherever syphilitic infiltrations occur there is good reason to believe that at that point an accumulation of the *materies morbi* takes place. It is the lesions of the disease that most readily convey the contagion. Though the serum of the blood without doubt contains inoculable germs, and is capable of com-

municating the disease when brought in contact with surfaces denuded of their integument, it is in a less degree contagious than the secretions of a syphilitic efflorescence such as the initial sore, a mucous patch, or the matter from a syphilitic pustule, or ulcer. Thence the inference may be drawn that the common syphilodermata are the expression of a determination of the syphilitic virus to the surface, where they constitute in a degree isolated foci of the disease. What the cause of this determination to the surface may be is not known. It may be vaguely referred to an effort on the part of nature at elimination. That it is due to something more than a gradual process of filtration through the skin is evident from the intermittences in the occurrence of cutaneous symptoms, as well as from the arbitrary forms in which the efflorescences are distributed and arranged. This arrangement and distribution betoken a central, probably nervous, controlling influence, but more than that can only be conjecture.

Now, in the case of the affection or affections which I have ventured to group together under the term *erythanthema syphiliticum*, have we to do with irritative processes which are the direct effect of a determination of the *materies morbi* to the surface, the same as in the case of the common or true syphilodermata, or do they represent rather indirect and secondary effects of the disease, and so correspond in their mode of origin to the simple affections which they resemble? On the one hand, it is not difficult to conceive that a sudden elimination of the disease-poison through the skin might produce a dermatitis in the same way as the sudden elimination of mercury through the salivary glands gives rise to ptyalism, or as the escape of iodine or bromine through the sebaceous glands is supposed to produce an acne. Furthermore, the fact that the erythematous lesion may subsequently become the site of well-marked syphilitic infiltration (as in G——'s case, and possibly in the last-cited case of erythema nodosum), gives a certain plausibility to this view. The dermatitis then becomes the immediate, the subsequent cell-development the gradual, effect of one and the same cause. They are two phases only of one process.

But, on the other hand, is it not at least equally supposable that, during those periods of activity in syphilis which are ordinarily attended with specific manifestations upon the skin, there may arise a condition of general angioneurosis, or localized neuritic conditions, capable of provoking irritative eruptions upon the skin, which have no connection whatever with any process of cutaneous elimination? Nor does the fact that erythanthema may be followed by a true syphilitic infiltration *in situ* necessarily militate against this latter hypothesis. There are circumstances in the clinical history of syphilis that tend to show that a topical irritation in a syphilitic subject is capable of evoking a true syphilitic lesion. So far as traumatic irritation is concerned, the fact is well attested. It is well known that a traumatism, especially when there is protracted irritation, is liable in a syphilitic person to become the seat of a local syphilitic process. This fact was particularly demonstrated in the experiments of Tarnowsky.

It is true with regard to most pathological processes in the skin, such as eczema, acne, psoriasis, and the like, that when the subjects of them become syphilitic these processes are not necessarily, nor even commonly, modified materially by the syphilis. Their lesions do not necessarily become infiltrated. In fact, it often seems as though the pre-existent pathological process, having once preoccupied the ground at the affected points, monopolized it to the exclusion of any syphilitic or other extraneous process. With regard to many eruptions I believe this to be true. Eczema, so far as I know, is never modified by syphilis, except through the cachexia induced by the disease, which usually renders all intercurrent affections somewhat severer than they otherwise would be. That it may coexist as a complication with an irritated or inveterate syphilitic lesion is observed often enough, but the eczema always preserves its characters distinct, nor does it ever, as I believe, elicit a syphilitic infiltration. Whether acne efflorescences are especially liable to become the seats of specific lesions I am unable to answer. From my own experience I should say that syphilitic patients, with acne vulgaris, are little if any more liable to syphilodermata in the face than others. It is doubtful, again, if anyone ever saw the lesions of an iodine acne become infiltrated in a syphilitic subject. With regard to psoriasis opinions upon the point under consideration have long differed, some maintaining that it may be modified by syphilis, others that it is not. It is doubtless much more likely, in psoriatic patients who contract syphilis, that the syphilitic lesions should assume a psoriatic character during this period of desquamation, than for the pre-existent patches of psoriasis to become the seats of specific infiltration. Nevertheless, that the latter may sometimes actually be the case, appears from a case recently reported by Dornig,[1] in which groups of syphilitic papules corresponded exactly with the sites of lesions of psoriasis which had long preceded the occurrence of the syphilis. The psoriatic lesions were gradually transformed into syphilitic lesions. This one case, it seems to me, suffices to show that it is possible for a common pathological process to act as the exciting cause of a syphilitic infiltration in the same manner, if not to the same degree, as do traumatic processes. That the former act in this way only exceptionally must, I think, be admitted. It might accordingly be inferred that the syphilitic erythanthema would only rarely produce a true syphiloderm. But this is not certain. An exanthem that develops during the active stage of syphilis, or during one of its periods of recrudescence, and is, moreover, a more or less direct consequence of the syphilis, would be far more likely to be attended with a syphilitic process at the affected point than would an affection, wholly independent of the syphilis, that may occur in the intervals of exacerbation, or, indeed, may have been antecedent to the specific disease, and has, perhaps, impressed its own peculiar character upon the tissue affected, so as to render it in a measure insusceptible to any other modification.

From the above considerations I draw the following inferences:

First.—That certain forms of erythanthema arising in the course of syphilis may be regarded as products of the latter disease; more especially when they coincide with, or are directly followed by, an outbreak of typical syphilitic manifestations.

Second.—That in view of their resemblance to simple angioneurotic or neuritic affections of the skin, it is probable that they also correspond to the latter in their mode of origin; and, while doubtless due primarily to the syphilis, they are not pathognomonic of the latter disease, and probably not equivalent etiologically to true syphilodermata.

Third.—And, finally, that the syphilitic erythanthema may, through reflex irritation, and in the same manner as a local traumatism, become the seat of a characteristic syphilitic infiltration.

An Error in Diagnosis.—The following is vouched for by an exchange as an actual occurrence: "A young man, fresh from college, was sent by his father, an old practitioner, to attend a case of labor. On making an examination he found the os undilated. After waiting an hour he applied belladonna ointment and endeavored to make forcible dilatation. Another hour passed, but no dilatation. Being alarmed he went for his father, but before they returned the child was born. The father found the child's anus red and patulous, and besmeared with belladonna ointment. The young man had met with a breech presentation, and had mistaken the child's anus for an undilated os uteri."

[1] Vierteljahressch. fär Derm. und Syph., 1886, p. 149.

THE ELECTRIC LIGHT AS AN ILLUMINATOR —THE EFFECT OF STRONG LIGHT ON THE EYE.[1]

By J. ALFRED ANDREWS, M.D.,

OPHTHALMIC SURGEON TO CHARITY HOSPITAL, NEW YORK, ETC.

THAT the exposure of the eye to an excess of light may be attended with harmful effect is a fact attested by the cases recorded in ophthalmic literature; and this subject has assumed a fresh practical importance since the application of electricity to lighting purposes.

Mackenzie, Jäger, Arlt, Dufour, Haab, Emmert, Sulzer, Simeon Snell, and others have recorded cases in which either retinitis or scotoma, or other visual disturbances, have resulted from exposure of the eyes to bright light.

Among 12 cases reported by Jäger as having resulted from looking at an eclipse, 8 cases were without material change; in 4 cases there was choroiditis.

Arlt describes one case of chronic choroiditis produced by looking at the eclipse of July 28, 1851.[2]

Schirmer gives one case of positive central scotoma after blinding of retina by lamplight, the same having occurred before when the patient looked at the sun or glaring light. Ophthalmoscopic examination showed an "especially dark macula lutea;" otherwise the fundus was normal.[3]

Dufour[4] gives one case, evidently carefully observed. The whole macula lutea was taken up with a dark-brown pigmented spot, the centre of which formed a sharply defined yellowish-white patch. Vision was reduced to $\frac{1}{20}$ during twenty-two days; the macula region was wholly normal. Vision was improved to $\frac{1}{2}$.

Haab[5] relates one case of central scotoma produced by observing the eclipse of the sun.

Emmert[6] gives one case. Vision reduced to $\frac{20}{100}$; fundus normal.

Simeon Snell (*Ophthalmic Review*, May, 1883, p. 141) records one case of retinitis, caused in a girl, aged twenty, by a "single flash from a sun reflector," in the hands of a boy. The eye was affected immediately; on the next day vision was = Jäger 20. In the neighborhood of the macula and optic disc there was cloudiness of retina. Perfect recovery.

D. Sulzer (*Klin. Monatsbl. f. Augenheilk.*, April, 1883, p. 129) relates four cases of retinal affection from direct observation of the eclipse of the sun of May 16, 1882. The symptoms were central scotoma, slight hyperæmia of the optic disc, exudative condition of the yellow spot, which, in one case, led to pigment degeneration in the region of the yellow spot.

H. R. Swanzy (*Ophthalmic Review*, May, 1883, p. 142) gives two cases of central amblyopia from exposure of the eye to the direct rays of the sun. There was in each case positive central scotoma, and metamorphosia, and a positive flickering after-image, which latter symptom continued four months after the exposure. There was no visible change in fundus. Vision (previously normal) was $\frac{6}{18}$ in right eye. Read with slightly excentric fixation with right eye, owing to central scotoma, although examination in the usual way for central scotoma, either with blackboard or perimeter, gave a negative result, the conclusion being that the defect was extremely small. But the patient declared that he saw Snellen's smallest type with difficulty, owing to the black spot which came just over the word he wished to look at. These cases are also interesting as having occurred in two individuals —a coachman and his employer—from the same cause at the same time.

Deutschmann (*Von Graefe's Archiv*, vol. xxviii., 1883, p. 241) records four cases of damage to the eye, caused by watching the eclipse of the sun on May 17th, 1882. Three of the patients had gazed at the sun with the naked eye; in the fourth case, a dark-blue glass had been used. Every one of the four had noticed, immediately after gazing at the sun, a dark or semi-blind patch in the middle of the field of vision, and in each a small positive scotoma was found on examination; scotoma not absolute in any of the cases. Gradual improvement occurred in all, but absolutely perfect vision was not recovered in any case. The ophthalmoscope showed corresponding changes in all, viz.: in the cases seen early, a small, bright-white spot at the centre of the macula lutea, and around this a blood-red ring shading off into the normal color; in the older case (four months), an appearance less easily distinguishable from that of the normal eye, and similar to that which the other cases presented when recovery was nearly complete.

Under the caption "Neuroses of the Visual Nerve-apparatus, caused by the Continuous Action of Bright Light," Mr. Reich (*Von Graefe's Archiv*, vol. xxvi., 1880, p. 135) described an epidemic of snow-blindness which occurred among a body of laborers engaged in clearing a way through masses of snow which obstructed the road between Passawaur and Mrleti, in the Caucasus. The rays of the sun, reflected from the vast stretches of snow on every side, produced an intense glare of light, which the unaccustomed eye could not support without the protection of dark glasses. A few of the sturdiest among the laborers were able to work with impunity, but the majority, and especially the weakly and anæmic, suffered severely in their eyes, in spite of various devices to protect them from the light. Among 70 strongly marked cases, 30 were so severe that the men were absolutely unable to continue their work or to find their way home. They were collected in a covered place, where Reich found them, on his arrival, prone on their faces, striving to hide their eyes from the light, and crying out from pain. Photophobia was present in all the cases. Hyperæmia of the conjunctiva, with more or less injection of the ciliary vessels, and even chemosis, was found in all the severe cases; those with chemosis complaining the most of pain. Cornea not affected in any case. The pain, generally of a cutting character, did not cease in darkness. Strong *contraction* of the *pupils* in all cases, except two, in which they were *dilated*, and in these two cases there seemed to be some degree of retinal anæsthesia and contraction of the visual field; the ophthalmoscope showed capillary hyperæmia of the optic discs and some over-fulness of the retinal arteries and veins; ciliary injection and chemosis were present in both cases, and the eyeball tension appeared to be somewhat increased. Recovery was gradual, but complete, in all cases. The author declared that the impairment of vision was not of the nature either of hemeralopia or nyctalopia, meaning by the latter the condition in which vision is persistently defective in ordinary light, but improved in diminished light. The conjunctival hyperæmia, which played a very unimportant part in the affection, is referred by the author to reflex dilatation of vessels through the action of light. W. C. Rockliffe (*Ophthalmic Review*, September, 1882, p. 308) records a case of acute conjunctivitis which he referred to the action of the *electric light*, the patient having been engaged in adjusting the carbon points of a Siemen's electric lamp of *three-thousand-candle power*, which he did without colored spectacles. The patient had noticed on other occasions that, on descending the ladder, after adjusting the carbon points, and a short expose, in close proximity to this very intense light, that he was unable to perceive the people on the street, but that this effect soon passed off. On a particular occasion, as his power of vision returned (in about fifteen minutes), there followed a rapidly increasing lachrymation, photophobia, pain, and swelling of the lids, the whole of these symptoms having been developed

[1] Read at the Twenty-second Annual Meeting of the American Ophthalmological Society, held at New London, Conn., July 22, 1886.
[2] Krankheiten des Auges, Bd. iii., p. 127. Prag, 1856.
[3] Klin. Monatsbl. f. Augenheilk., 1861, p. 261.
[4] Bulletin de la Société Médicale de la Suisse romande, 1879, p. 267. See, also, by the same author, other cases of trouble to the eyes resulting from observing the eclipse of May 16 and 17, 1882.
[5] Correspondenzblatt für Schweizer Aertze, 1882, p. 383.
[6] Revue Médicale de la Suisse romande, 1882, p. 395.

in thirty minutes. Rockliffe describes the lids of both eyes as having been very hot, red, swollen, and brawny, and as being on a level with the superciliary ridge, the swelling extending some distance below the brow. The pain was most acute in and around the eye. The conjunctival vessels were exceedingly large, and the eyelids and the eyeballs were a brilliant scarlet. The corneæ were clear. All of these symptoms yielded to a brisk purge and a lead lotion in forty-eight hours. His fellow-workman was similarly affected, but to a less degree.

A. Emrys-Jones (*Ophthalmic Review*, April, 1883, p. 106) records the case of a person engaged in experimental work with the arc electric light, which necessitated his gazing intently with the naked eye at the LIGHT, from a distance of a *few inches*. As there was no inconvenience at the time, and that the longer he looked the more accustomed his eye became to the light, he continued his observations for *twenty minutes*. The next morning he awoke with intense pain in the eyes, and profuse lachrymation and photophobia; also slight redness of the conjunctiva, but no swelling of the eyelids. A drop of atropine instilled into the eyes gave instant relief, and as soon as the physiological effects of the atropine had passed off the patient was able to resume his work. Jones also adds a description, written by the patient himself, who had a great deal to do with electric lighting, in which he speaks of the effect of the light on the eyes of persons engaged in working in close proximity to the light (*arc light*). In the worst cases, which generally arise from adjusting the lamp (*two-thousand-candle power*) while burning, without goggles or smoked glass, the distance of the eyes would average eighteen to twenty-four inches, and with weak eyes *one minute* will produce certain inflammation (?). He thinks that much depends on the nature of the light, as he found that either an excess of current, which produces a violet light, or a defect of current, which gives an orange light, is less injurious than the normal (white, tinged with a sky-blue) light. David Little (*Ophthalmic Review*, July, 1883, p. 197) speaks of a case of retinitis occurring in a gentleman, engaged in scientific experiments with the electric light, who had neglected, on one occasion, to put on his dark spectacles while thus operating; the box containing the electric light was suddenly opened, and the light fell upon his *right* eye. It was a great shock to him, and he was blinded for several minutes; his eyes were very intolerant of light for several days afterward, and he suffered a great deal from headache. Two months after the accident he consulted Dr. Little on account of a mist and dark specks before his *right* eye, which had existed since the accident. Vision of right eye = $\frac{10}{10}$; the vision of left eye was good, and the fundus was normal. There was haziness over the right optic disk and the retina immediately around it.

Eye-affections caused by lightning have been classed in the same category with those ocular disturbances caused by exposure of the eye to strong light, partly, perhaps, because in the older text-books the intense light of lightning was assumed to be the chief agent; but the intensity and duration of lightning are not sufficient, and the lesion so produced does not at all correspond with that produced by lightning, since the scotoma produced by exposure to bright light, as recorded in literature, has been of limited extent, instead of affecting the entire field as in the case of lightning. Moreover, it is impossible to ascribe to the action of light the associated nerve-lesions, or the structural changes in the choroid and lens, which obviously are caused by lightning. That light, under certain conditions, is capable of producing opacification of the crystalline lens—one of the prominent ocular lesions caused by lightning—has been demonstrated by Czerny, who showed that e direct rays of the sun, condensed by a lens, will oduce in the eye of the rabbit an opacity of the crystalline lens in about a quarter of a minute, by coagulation of albumen; but this can hardly afford an adequate explanation of the production of cataract by lightning, for, apart from the less intense brilliancy of a lightning-flash as compared with concentrated sunlight, the duration of the former is much less than a quarter of a minute. Leber (*Von Graefe's Archiv*, vol. xxviii., p. 255), who has given a comprehensive analysis of all that is at present known of ocular injuries caused by lightning, rejects the idea of any mechanical production of the opacification of the lens, and attributes it to a "direct *physico-chemical action* of the electricity on the lens substance by which its albumen is coagulated;" but Leber does not refer this coagulation to heat alone, for it can readily be shown that a higher and more enduring degree of heat would be required than can reach the lens during the lightning-flash, nor was there any external sign of scorching of the eyes in those cases in which cataract was produced by lightning; hence Leber regards the coagulation of albumen to be a kind of catalytic action, as compared with the curdling of milk which occurs during a thunder-storm. Leber further suggests that this catalytic action is not confined to the lens, but would probably be discoverable as an opacity in many other structures, were they transparent. The opacity of the lens in these cases is said to be permanent, and the non-vascularity of the lens may furnish an adequate explanation of the permanence of the lesion in this body. This is certainly a reasonable hypothesis, but it does not necessarily exclude the probability of a mechanical injury to the lens, simply because the capsule of this body remains undisturbed, any more than the rupture of the choroid, and hemorrhage from the choroid and retina, and partial detachment of the retina, which are also known to occur from the shock without the patient being struck by the lightning, and without rupture of the external tissues. Thus we see intense light is not the chief agent in an electrical explosion in producing the eye-affliction.

There is another class of cases which may be considered in connection with this subject, viz., the opacity of the lens occurring among glass-blowers, in whom the intense radiant heat to which their faces are exposed (148° Fahrenheit) seems to be the chief agent in producing this condition; but I have not found cataract so common among the glass-blowers whom I have examined—284 in all—4.5 per cent. showing lenticular opacities among 65 men under thirty-eight years of age, and twenty per cent. among those men who were over forty years of age. Meyhoffer (*Klin. Monatsblätter f. Augenheilk.*, February, 1886, p. 49) found among 506 glass-blowers just the double of my percentage among those men under forty years of age. I did not find any lesion of the fundus of the eye which could be referred to the occupation as a cause.

In the first class of cases of eye trouble alluded to above, as resulting from exposure of the eyes to direct sunlight, it appears that lesions are produced which are identical to those found by Deutschmann in the retina of rabbits when the direct rays of the sun, condensed by a concave mirror, and then rendered parallel by a convex lens, are caused to enter the dilated pupil. After exposure for only a few seconds the ophthalmoscope revealed a silvery-white patch surrounded by a dark-brown ring in the retina. The microscope showed that the material changes consisted in an actual disorganization of a limited area of the retina by coagulation of the albumen in its tissue, and beneath and around this a vascular reaction in the choroid, leading to hyperæmia, exudation, diapedesis of blood-corpuscles, and pigment disturbance. It will be observed by referring to the cases recorded by Arlt, Schirmer, Dufour, Haab, Emmert, and others, of visual disturbance caused by exposure of the eye to direct sunlight, that in the majority of instances there was no demonstrable lesion in the fundus oculi; nor is the evidence as to the causation quite satisfactory when such lesions have been found, the pre-existence of the lesion in the fundus not having been disproved; and yet the

similarity between the effects obtained by Deutschmann in his experiments (cited above) on rabbits and those observed in the human eye is presumptive evidence that the actual lesion in the latter case is also a destructive coagulation of albumen in a minute area of the fovea centralis, together with congestive or inflammatory changes beneath and around this spot, although the condensation of the light in the case of Deutschmann's rabbits and the dilatation of their pupils constitute an important difference in the conditions.

In order to ascertain whether the invisible heat-rays were concerned in producing the changes in the fundus found in the rabbit under exposure to direct sunlight, Deutschmann caused the pencil of light to pass through a stratum of water two decimeters thick before reaching the eye. The same effect as before was obtained, but required rather longer for their production; but, of course, the mere exclusion of the obscure heat-rays does not exclude *heat* as the essential cause of the mischief, for it can readily be shown that in the mixed radiation from a luminous object the light is capable of being converted into heat; therefore, that the light-rays also raise the temperature. The use of dark glass in Deutschmann's cases did not suffice to prevent the damage to the retina.

The spectroscope declares that the solar, gas-flame, and electric-light spectra have for their base a continuous strip or band of light—in the case of the gas-flame (the bright part) crossed by the sodium lines only; in that of the sun, by Fraunhofer dark lines; and of the electric (arc) light, by the bright line of carbon. The illuminating power of each of these sources of light is thus shown to be due to the incandescence of their several solid and gaseous constituents.

It is of practical importance to learn something about the relative effect of the different forms of artificial light on the human retina. All forms of artificial light contain, as compared with daylight, an excess of waves of long wave-length, *i.e.*, they are of a *yellowish* hue. In the electric light the short-wave rays predominate, *i.e.*, the violet rays. The ultra-violet region in the light of the electric arc is from six to eight times as long as the whole of the visible part of the spectrum.

Even the electric light looks yellow as compared with daylight, which latter, although generally called *white*, has been shown to be decidedly *bluish*; but, as far as mere *color* is concerned, the *electric light* approaches nearer to that of the *sun* than does the gas or lamp flame. But which has the more to do in producing evil effects on the eye after long and continuous work by artificial light—*color* or *heat*? Meyer gives the following proportionate constitution for three kinds of artificial light:

	Red.	Green.	Blue.	Violet.
Electric	2	1	0.8	1
Petroleum	3	0.6	0.2	0.1
Gas	4	0.4	0.2	0.1

Gas emits the greatest amount of heat; petroleum lies between gas and the electric light, which latter, from the fact that there are no gaseous products to radiate heat without light, taken together with the high temperature of the incandescent carbon, unite to give us the maximum of light with the minimum of heat. Those who have a great deal to do with the *arc electric light*, which is intensely brilliant, say that the injurious effect on the eye depends a great deal on the nature of the light, *i.e.*, a violet light, produced by an excess of current, or an orange light, given by a defect of current, is less injurious than the normal light—white, tinged with ashy blue—and that a fluctuating light is always more dangerous than a steady one.

Tyndall has shown that the value of the luminous radiation from the flame of oil, gas, and the electric light is as follows:

	Luminous.	Obscure.
Oil flame	3	97
Gas flame	4	96
Electric light	10	90

We have, therefore, with the *electric light*, the *maximum of light* with the *minimum of heat*. We have seen that in the electric light the short-wave rays predominate, *i.e.*, the *violet rays*, and that the *ultra-violet* region in the electric arc is from six to eight times as long as the whole of the visible part of the spectrum. We know that chemical action is more energetic in this part of the spectrum than in any other part, and that this action extends beyond the violet to the *ultra-violet rays*, and the properties of this part of the spectrum are very strikingly shown by the pronounced action exerted by the electric light in the growth of plant life.

Chardonnet (Vision des radiations ultra-violettes, Compt. Rend. hebd. des séances de l'Acad., No. 8) has recently made some interesting investigations on the absorption of ultra-violet rays by the media of the eye, particularly by the crystalline lens, this absorption not being done without fatiguing the eye, especially when it concerns the long and brilliant spectrum of the *electric arc*. But he found, on photographing the spectrum of the incandescent electric light, that the spectrum hardly passed beyond the visible spectrum; hence he inferred that this incandescent electric light saved the media before the retina the labor of absorbing and diffusing the ultra-violet spectra. I do not believe that we should attach much practical importance to this explanation. It is easy to convince one's self that the inconstant and unsteady intense glare of the *arc electric light*, only faintly modified by an *opal* or *ground-glass globe*, is extremely distressing to the eyes.

So far all the cases of injury to the eye from the electric light recorded in medical literature have resulted from exposure of the eye in close proximity to the *arc electric light*, and this has, in every instance, been of a very intense brilliancy, generally that used for street illuminating purposes—two-thousand-candle power—which may be actually fifteen-hundred-candle power. In many of these cases a pre-existent abnormal condition of the eye was not excluded; and if we compare the groups of cases so far recorded, the evidence seems to me to point more directly to a vaso-motor disturbance—*i.e.*, that we can best account for the condition by invocation of the sympathetic nervous system, rather than by assuming an actual mechanical or chemical injury. The severe pain and photophobia complained of would certainly be explained by the excessive stimulation of the whole retina, and, corresponding thereto, a general hyperæmia of the uveal tract; and these causes might naturally augment any pre-existing retinal or choroidal affection. At any rate, with regard to retinal changes it is not by any means established that simple dazzling by bright light can produce a progressive diffuse retinitis, such as has been claimed it has. However, the case of the late Professor of Physics at the University of Ghent, J. Plateau, who, in 1829, while trying to observe the effect of irritation of the retina, gazed steadily at the sun for twenty seconds, chronic irido-choroiditis having resulted (?), followed by total blindness in the course of fourteen years, is on record.

So far as I have been able to ascertain, no case of accident to the eye has been reported as having been caused by the *incandescent electric light*. Of the 1,100 persons whom I have examined and observed during the past year who work by day or by night for many hours by the *incandescent electric light* of *Edison's lamp*, there was not a single instance of injury to the eye; but, on the contrary, I was surprised to find that a considerable number of these persons, with a high degree of myopia and choroidal changes, were absolutely comfortable while working by this light, and they expressed themselves as having experienced a great improvement in the condition in their eyes since they had begun to work by the electric light (Edison lamp of twelve- to sixteen-candle power), always shaded from the eyes, the light being thrown down upon the work from a short elevation. Many persons among typesetters and copyists have told me that for-

merly, when gas was in use in the establishment in which they worked, they went home from their work with their eyes red, watering, and aching, and this was especially the case among short-sighted persons, but that they could work longer by the Edison light (the arc light distressing them), and without discomfort. Of course, every form of artificial light is more or less dazzling when the source of light casts its image on the retina. We certainly can avoid this dazzling in the gas or petroleum flame by means of an appropriate shade; but, in order to secure the requisite amount of illumination, we must either approach the light close to the head, and thereby expose the eyes to the undesirable radiant heat, or increase the illumination at a greater distance, and thereby make an increased demand upon the vital parts of the atmospheric air in the room, thus vitiating the latter, which is a very undesirable equivalent. The amount of heat radiated by the electric light is very unimportant; and when, after sunlight, we add to its unrivalled qualities as an illuminator the steadiness and absence of combustion from the *incandescent lamp of Edison*—there being, therefore, no consumption or vitiation of the atmospheric air induced by it—together with the practical clinical fact that it is a greater comfort for even persons with existing eye affections to work by this light than by any other artificial illuminator, we must, from a therapeutic point of view, concede to the incandescent electric light advantages not possessed by any other artificial means of illuminating; and anyone who has given the subject thoughtful consideration will at once see the great blessing which would come from introducing this kind of light into our *night-schools*, *theatres*, *public halls*, and those innumerable *counting-rooms* in this great city where large numbers of human beings work by artificial light during the entire day or night, the demand upon the atmospheric air by the individuals alone being, in the absence of adequate means of ventilation, and in the majority of instances very little ventilation at all, in these overcrowded places, terrible enough without the additional mischievous agent in vitiating the atmospheric air present in the many *gas flames*. The advantage of using the incandescent light in our ophthalmoscopic dark-chamber must be evident to every ophthalmic surgeon.

My conclusions are as follows:

The *arc electric light* is not so objectionable on account of its intense brilliancy, which can be modified by means of an opal or ground-glass shade or globe.

The gazing at the *arc lamp* for many seconds is attended with great risk to the eyes. The *arc light*, in its present state, should be positively rejected as unsuitable and actually harmful to the human eye, particularly on account of its unsteadiness.

The *incandescent light of Edison*, because of its steadiness, adequate power and composition, is safe, and occupies at present the first position as a means of artificial illumination. By its use the accommodation of the eye is less taxed than by other illuminators.

The light may advantageously be placed on the table in *front of* the person using it, but it should *never shine directly into the eye*, but always be *completely hidden* from the eyes by means of an opaque shade made of glass or tin, and the light be thrown down upon the work. For obvious reasons, it is further believed that the incandescent electric light is especially beneficial to hypermetropes and myopes.

40 West Twenty-fourth Street.

The Gropings of Medicine.—A physician was once conversing with a prince who spoke of medicine as a science of guess-work. "But, sire," he said, "let us suppose that an Egyptian darkness were suddenly to come over the land. Would you not rather trust to a blind man to guide you to Paris than to one who might see in the light; to one who had learned to grope his way in the darkness than to another who would stumble and go astray the moment his clear sight was dimmed?"

A NEW APPARATUS FOR THE STUDY OF CARDIAC DRUGS.

By WILLIAM GILMAN THOMPSON, M.D.,

NEW YORK.

Since publishing in The Record[1] a preliminary notice of work upon the application of instantaneous photography to the study of the movements of the heart and intestines, I have had constructed a special apparatus which is so great an improvement that it leaves little or nothing to be desired in accuracy and rapidity of movement. The apparatus was devised by Mr. R. D. Gray (the inventor of the ingenious "vest camera" and other photographic improvements) and by myself. I described what was required and suggested various modifications and improvements, but the mechanical details were worked out exclusively by him. To test the rapidity of the camera we photographed a "horse-timer" clock, with a dial marking quarter-seconds, and succeeded in

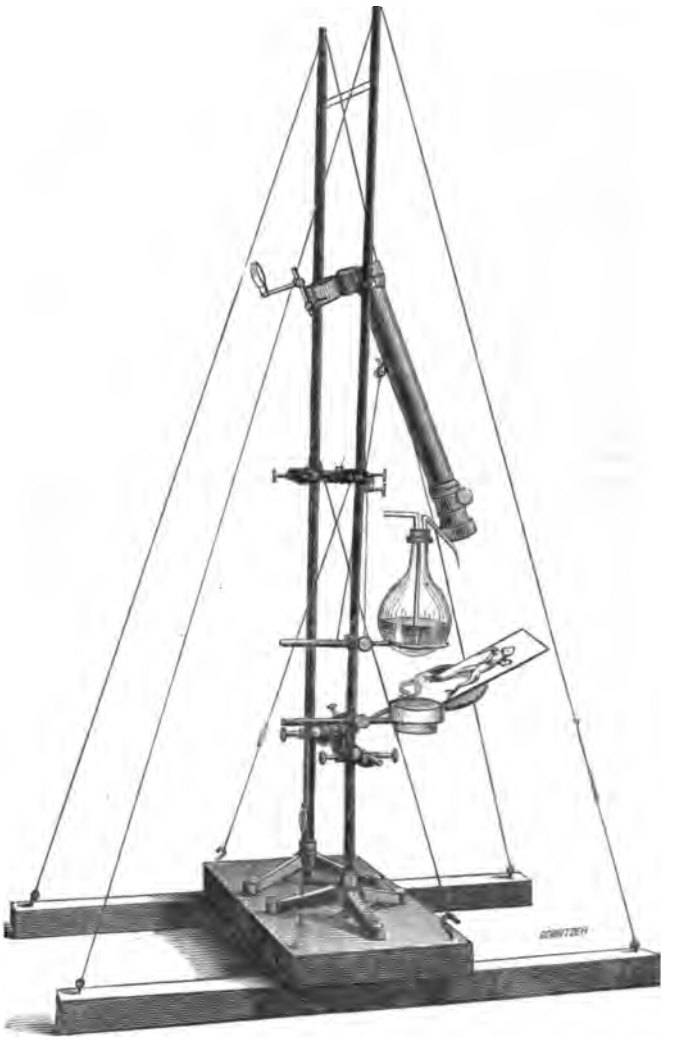

Fig. 1.—The Camera Mounted.

taking five distinct photographs in half a second with *one* lens, which has never before been accomplished excepting by Professor Marey,[2] at the Collège de France, who has taken successive views of flying birds, falling balls, etc., with one lens at a very rapid rate. His camera was unknown to me until after mine was constructed, so that as a success in photography alone the work is interesting.

The camera consists of a circular brass box, 5½ inches in diameter and 1¼ inch deep, containing a circular vulcanite shutter with two apertures, behind which is placed a circular dry plate. Both plate and shutter are revolved in opposite directions to each other by a simple arrange-

[1] Instantaneous Photographs of the Heart in Motion and of Peristalsis, illustrated, Medical Record, March 13, 1886, p. 300.

[2] La Méthode Graphique (Supplement), Paris, 1885.

ment of four cogged wheels moved by a single crank. The box is perforated at one side by a circular opening, 1¾ inch in diameter, from the margin of which projects at a right angle a long brass tube (Fig. 1), which carries the lens. In Fig. 2 the lid of the box has been removed, and the bottom of the box, with the wheels, springs, and partially closed shutter, is presented. The lid is double—that is, it is a flat box in itself. It contains nothing but the dry plate, supported at its centre upon a small brass disk, against which disk it is firmly pressed by a pivot attached to a spring fastened in the lid. The aperture in one side of this double lid, which corresponds with that seen in the floor of the box, may be closed by a slide, so that the lid containing the plate can be removed like an ordinary plate-holder and carried to a dark room, where it is opened and the plate is changed. When the lid is replaced this slide is removed, and as the shutter is made to revolve, the light falls upon whatever portion of the dry plate happens to be opposite the opening.

By reference to Fig. 2 it will be seen that when the large wheel which projects outside of the box is revolved by a crank it turns the small ratchet-wheel, which bears an eccentric pawl. (The crank has been removed in Fig. 2; it is seen in Fig. 1.) The central wheel has only six cogs. The pawl is pressed into one of these cogs by a spring. It pushes the central wheel around one-sixth of its circumference, when it returns to be pressed into the next cog. While the pawl returns it necessarily leaves the central wheel at rest, and whatever momentum this wheel carries is checked by a simple stop pressed by a spring upon the opposite side. The central wheel carries a square axle, which projects through a small hole in the centre of the double lid and fits into the brass disk before alluded to, causing the disk to revolve with the axle. The disk is covered by rubber cloth; and as the dry plate is pressed firmly against the rubber surface by the spring in the lid, the plate adheres to the rubber and revolves with the disk. Thus every complete revolution of the central wheel in the floor of the box carries with it the dry plate, stops it, and moves it on again six times. The velocity of revolution of the plate is only limited by the rapidity with which one can turn the crank.

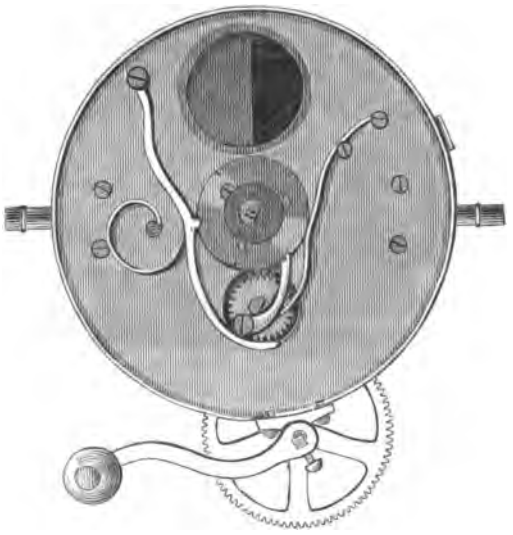

FIG. 2.—Interior of the Camera.

The shutter is revolved in the opposite direction by a wheel whose cogs are seen fitting into those of the little wheel carrying the eccentric pawl.

The two apertures in the shutter are so placed that at the instant of exposure of the plate it is momentarily at rest, while the plate when moving is covered by the shutters. This arrangement prevents vibration of the plate and blurring of the image. The camera is mounted by two lateral axles with screw clamps upon two iron stands, such as are in common use in chemical laboratories. A brass rod attached to the tube steadies it, and allows it to be screwed fast at any angle corresponding to the angle at which the heart is placed. It is thus easy to put a manometer tube in the femoral artery of an animal, bend it up alongside of the exposed heart, and simultaneously photograph the cardiac contraction and the degree of rise of the fluid in the manometer (!). The tube is arranged like the draw-tube of a microscope. It is made long, so as to admit of taking small hearts at life-size. The stand carries a support for the frog or other animal to be experimented upon, and a bottle of physiological salt-solution kept warm by a spirit-lamp beneath.

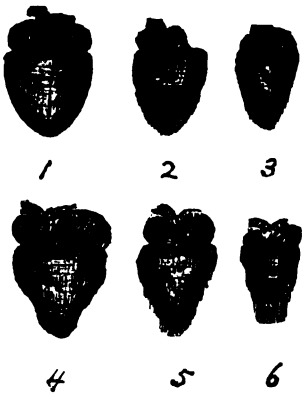

FIG. 3.—Photographs of the Heart in Motion: 1, Normal diastole; 2, auricular systole; 3, ventricular systole. 1, 2, 3 were taken in a half-second; 4, 5, 6, same as 1, 2, 3, after injection of toxic dose of strophanthus hispidus. 4, 5, 6 were taken in a half-second. The pulse rate was 74.

The whole apparatus is readily packed in a small space. I have already taken a number of photographs of various hearts and intestines with it, and the contraction of the heart of the frog produced by *strophanthus hispidus*, the new cardiac stimulant, is seen in Fig. 3, taken by this new instrument. The apparatus has the great advantage that six photographs of a single cardiac pulsation, or of any muscular contraction, may be easily taken in less than one second, or, by simply turning the crank slower, they may be taken at any desired rate to keep pace with the rhythm of the heart. The second-hand of a watch may be placed in the field of view and simultaneously photographed with the heart, so that there can be no question about the series of photographs all belonging to one pulsation.

I have already called attention [1] to the ease with which these photographs are enlarged for lecture-room demonstration, either on paper or in a stereopticon, and the ease with which they may be reproduced in print to illustrate the action of drugs.

49 EAST THIRTIETH STREET, NEW YORK.

DISCUSSION ON OVARIOTOMY.—The discussion concerning ovariotomy has now been going on for some months. Many of Mr. Lawson Tait's detractors are not slow to suggest that by his eager advocacy of the operation he has induced many surgeons to perform it in unsuitable cases, even if he has not done so himself. Mr. Tait's rejoinder is that he has frequently protested against the indiscriminate removal of the uterine appendages without due consideration. The Liverpool inquiry has not yet come off, and the whole subject may be regarded as in an unsatisfactory state. In evidence of this the following incident recently narrated on good authority may be recounted: A lady coming from abroad was advised to consult a certain distinguished surgeon who diagnosed disease of the uterine appendages and recommended their removal. By the wish of her friends she consulted a well-known gynecologist before consenting to the operation. He carefully examined her and then delivered himself to the following effect: "Yes, you may have your ovaries removed, and may be it will do you good. And you may have your great toe removed, and perhaps that would do you good. Of the two, perhaps the latter will do you the most good." The patient, however, in spite of this opinion visited the first consultant again, had the operation performed, and then left this country.—*London Correspondence.*

[1] MEDICAL RECORD, loc. cit.; Recent Advances in Methods of Studying the Heart, Medical Press, Buffalo, March 1, 1886, p. 234; Instantaneous Photographs of the Heart, Johns Hopkins University Circulars, March, 1886, p. 60.

Clinical Department.

MIASMATIC HÆMATURIA.

Dr. J. Edward Stubbert, of Bloomfield, N. J., writes: "In the last number of the *Medical and Surgical Reporter* an article appears entitled 'Malarial Hæmaturia.' The writer claims, or intimates, that his plan of treatment is, *par excellence*, the mode to be adopted. From a rather extended experience with the disease in question, in the State of Florida, I am prepared to say that all cases are amenable to treatment by quinine, if such treatment be entered upon within thirty-six hours of the onset. As this peculiar disease is not widely known I will state briefly that it occurs only in those persons who have been for a long time subjected to slow malarial infection, without the proper administration of quinine. So nearly does the general appearance of the patient resemble that of one with yellow fever that superficial observers have named the disease 'highland yellow fever.' The distressing symptoms are hæmaturia, intense nausea, and black vomit, extreme thirst, frequently repeated chills of a congestive character, and, at, times, sinking turns amounting almost to syncope. The remaining symptoms are those common to all other cases of remittent fever. In fact, I believe the disease in question is simply an aggravated form of remittent fever. Owing to the severe gastric disturbance, it is impossible to exhibit quinine in sufficiently large doses per orem, hence it is my custom to administer hypodermatically ten grains of the bisulphate of quinine three times a day at least.

"The object being to thoroughly cinchonize the patient, the frequency of the dose will depend upon how readily that end is attained. My friend, Dr. George Troup Maxwell, of Florida, is in the habit of combining morphiæ sulph., one-eighth of a grain, with each injection of quiniæ bisulph. Saline diuretics seem to me to act well by relieving the kidneys by flushing.

"As soon as the patient becomes thoroughly cinchonized the temperature begins to fall, the urine becomes clear, all other symptoms ameliorate, and the patient goes steadily and rapidly onward to the stage of convalescence. I have never lost a case treated in this manner within thirty-six hours of its commencement. Dr. Maxwell has met with equally good results, and in a larger number of cases. The position taken by some, that 'pure blood' is passed from the kidneys, seems to me untenable. It is impossible for a reasonable physician to believe that quantities of blood so great as some claim could be lost daily and the patient still live. Is it not more reasonable to suppose that the evacuations are urine colored by the coloring-matter of the red corpuscles, which have been disintegrated by the high temperature, and the coloring-matter of which, by loss of plasticity in the blood, has been allowed to exosmose into the urine?"

A NEW METHOD FOR THE DETECTION OF HYALINE CASTS.

Dr. S. E. Armstrong, of Passaic, N. J., sends us a description of a method of manipulation devised by him to facilitate the detection of hyaline casts in the urine. He calls attention to the value of these casts from a diagnostic point of view, since the presence of albumen alone is no certain evidence of the existence of nephritis, and its absence does not necessarily imply a healthy state of the kidneys. He writes: "The hyaline cast may be said to form the stroma of all other varieties—the oily, epithelial, granular, etc. It is always found in some of the different stages of any of the forms of Bright's disease, particularly in the first stage, when a recognition of the trouble is most to be desired. The propriety of making a positive diagnosis on the strength of this one sign may justly be questioned, but there are usually other symptoms, objective or subjective, to aid us. Of course, the use of the microscope in the search for hyaline casts is an absolute necessity. Two methods are usually taught, viz., staining and tilting the mirror. The first I regard as impracticable, because it involves too much trouble; the second, because it is unreliable. I have never been able to make the desired success of either, though I must confess that I have not frequently tried the former. There is another method, which comes to me in the nature of a discovery. Others may have known of it for years; I have not been able to find a description of it in the books, although it may be there. Briefly, it consists in preparing the specimen in the usual way, between a plain slide and cover-glass. Then placing the slide in position and adjusting the focus, the observer, with his eye at the instrument, presses the cover-glass down with a thumb on either side of the objective, and then the slide being held firmly by the clips, pushes the cover-glass a little bit forward and back. By this means he has the advantage of *looking for an object in motion;* also, a cast, if present, is made to pass, rotating on its long axis, through different planes of the fluid, *hence through different possible foci.* By this means alone it is almost sure to be discovered. But there is still another advantage in this method, viz., as the cast revolves through the liquid it gathers on, perhaps amorphous urates, vibriones, or whatever minute object it comes in contact with, and is thus brought out into bold relief. Of course we must by previous examination exclude granular casts, otherwise *after* manipulation we may be puzzled to tell which variety we have discovered; we must also be sure we have not rolled out a white blood- or pus-corpuscle, so that it misleads us into the belief that we have found a short one of either one or the other variety. Prolonged manipulation is neither necessary nor advisable."

MOVEMENTS OF A TAPE-WORM OUTSIDE OF THE BODY.

Dr. W. E. Driscoll, of Cowan, Ind., referring to a case recently reported in The Record by Dr. Bidwell, sends the following: "A stout German girl, aged twenty-three, came to me in November, 1884, complaining of indigestion. She also complained of other symptoms, which pointed, as I thought, to tape-worm. I ordered her to fast twenty-four hours, beginning in the morning. The second morning I administered a dose of the tannate of pelletierin. This was at eight o'clock. Twenty minutes later I gave her a cathartic of jalap and calomel. I then left the house, and returned at 11 A.M., three hours after she took the remedy. She had passed the worm, had washed it clean, and placed it in the chamber. It had considerable motion, but not enough to crawl upon the floor had it been out. The patient stated that she had passed the worm at least half an hour before my return, and that it moved violently, and notwithstanding she washed it in cool water from the hydrant, it continued to move many minutes after it was voided. The girl resumed her duties the next day (that of chambermaid in a hotel). The medicine made her 'drunk,' she said, but not sick. The worm came away in one solid piece, head and all, and measured thirty-three feet."

The Disease of the Working Classes.—Aneurism of the aorta is the disease of the working classes, according to Dr. Richter (*Arch. f. Chirur.*, xxxii.). The two great causes are chronic alcoholism and severe muscular exertion. The greatest number of cases occur between the ages of fifty and sixty, next between forty and fifty, and last between sixty and seventy. The arch of the aorta has the most aneurisms, then the descending portion, then the abdominal, and last the ascending portion.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE VARYING RESULTS OF CONTUSION OF AN ARTICULATION.

TRAUMATISM, as is well known, is a frequent exciting cause of disease, calling into activity pathological processes which might otherwise have lain dormant for years. This, as has been pointed out by Verneuil, in Dechambre's "Dictionnaire Encyclopédique," is especially true of contusions where the tissues are bruised and rendered more vulnerable to the attacks of disease. But the results of contusion are varied, and a knowledge of the constitutional predisposition of the individual is essential to an approximatively correct prognosis of such injuries. This fact is well illustrated by the report of a series of joint injuries occurring in the practice of M. Verneuil (*L'Union Médicale*, June 19, 1886).

The first case was that of a young man, twenty-one years of age, who had fallen from a horse, striking heavily over the region of the great trochanter. The patient's mother had died of phthisis, and the man himself presented evidences of commencing tubercular trouble in the apices of both lungs. In spite of rest and appropriate treatment, the signs of osteitis of the hip soon presented themselves. The patient died in about three months from pulmonary disease, aggravated by the confinement and exhaustion consequent upon the coxitis. At the autopsy, the hip-joint was found in an advanced stage of disorganization, the head of the femur was nearly destroyed, and the joint was filled with tubercular fungoid growths.

The second patient was a strong, athletic man, twenty-two years old, who had fallen from a wagon on his hip. He suffered intense pain, was unable to walk, and was supposed to have sustained a fracture. Examination, however, showed simply a contusion of the articulation and of the surrounding tissues. The result of the injury was an acute rheumatic inflammation of the joint, which was, however, of short duration and yielded readily to treatment. The man was of a florid complexion, ate and drank a good deal, and had complained at times of slight pains in the legs, which he had attributed to exposure.

In the third case the patient was a girl, sixteen years of age, of good constitution, who had fallen violently on the left hip. She was treated at her home in the country for many months without much benefit, and was finally sent to a hospital. On admission she was found to be in excellent general health, notwithstanding her long confinement. She could not walk without the aid of crutches, and then only with difficulty. The affected hip was flexed nearly to a right angle, and the thigh could not be brought down on a plane with the other without causing tilting of the pelvis and curvature of the dorso-lumbar spine. After a careful examination a diagnosis by exclusion was made of neuromimetic coxalgia. This diagnosis was strengthened by the existence of ovarian tenderness and of areas of anæsthesia on various parts of the body. Upon placing the patient under chloroform, the limb could be at once restored to its normal position. It was retained thus for several days, bromide of potassium and various antispasmodics were exhibited, and the patient was sent home cured in a few days. Finally, there was another case, very similar to the last, in which there was apparent anchylosis of the elbow following a contusion of this articulation. The patient, a boy fifteen years old, was anæsthetized, with the object of breaking up the adhesions; but, to the surprise of the operator, the joint yielded immediately, the anæsthesia was complete, and there was no return of the contracture subsequently.

These cases are very instructive, showing, as they do, how varied may be the results of contusions of the articulations, and how much the prognosis depends upon the individual constitution of the patient. It is important also to remember that apparent anchylosis, following joint-injury, may be purely hysterical in character and easily amenable to treatment by reposition under anæsthesia and retention for a time in the normal position. Many of the alleged wonderful cures effected by the so-called bone-setters, and, in recent times, by faith-healers, are cases of this sort, and were they recognized, as they should be, by the medical attendant, the profession would be saved much discredit and quacks would be enabled to make much less capital out of their cures of cases "given up as hopeless by the most eminent surgeons."

A NEW BRAIN-FISSURE—THE PAROCCIPITAL.

PROFESSOR BURT G. WILDER, of Ithaca, has subjected a certain fissure, or, Ithacally speaking, "gyre," in the occipital lobe of the human brain to neuronymic and monographic treatment. The article may be found in the ventral portion of the *Journal of Nervous and Mental Diseases* for June, 1886. The fissure in question has heretofore been considered to form the posterior (caudal) extremity of the great interparietal fissure, but the investigations of Professor Wilder lead to a different view, and the fissure in question comes out from these investigations with a nosological enrichment and an anatomical autonomy that are most gratifying.

Professor Wilder believes that he has shown that the transverse fissure of Ecker, with which the interparietal fissures generally connects, caudal, *i.e.*, posteriorly, is not an independent fissure, but is made up of the caudal ramus and stipes of an independent fissure, *the paroccipital*. This paroccipital fissure is spoken of generally as the posterior division of the interparietal; but Wilder claims, from a study of a number of brains injected with alcohol, and otherwise prepared brains, that it is independent, and should be described as such. This new fissure is yoke-shaped, the yoke having two rami laterad,

and two stipes mesad (we are using here pure Wilderese), while the main bar is called the "zygon." We have never seen a yoke exactly like that figured by the distinguished neuronymist of Cornell. It comes quite as near to resembling that article, however, as the Great Dipper does to outlining a bear, and we are not disposed to complain.

Writers of anatomical text-books and republishers of Eker's cuts will have to bear in mind these two things, made probable at least by Professor Wilder's painstaking, though word-encrusted, researches:

First, The transverse occipital fissure, always figured as a separate fissure, is not such, but only a branch of the paroccipital.

Second, the posterior or occipital end of the interparietal fissure is to be regarded, perhaps, as an independent fissure (the paroccipital), and not as part of the interparietal.

Professor Wilder's article is accompanied with an excellent translation from Ithacan to English.

FIFTY YEARS OF MEDICAL MISSIONARY WORK IN CHINA.

THE Medical Missionary Society of Canton, China, celebrated the semi-centennial anniversary of its existence on December 31, 1885, and a report of the proceedings, together with a review of the Society's work, have been forwarded to us.

An American physician and clergyman, Rev. Peter Parker, M.D., has the credit of establishing the first medical missionary hospital in China, fifty years ago. Dr. Parker was a pioneer in medical missionary labor, and was the means of causing a great deal of activity in this kind of work. His first hospital at Canton was directed by himself for twenty years. It was then placed in charge of another American, Dr. John G. Kerr, who is still there at his post.

The work of the medical missionaries at Canton has been a most laborious and useful one, and some of the gentlemen who have been so faithful deserve, perhaps, a wider recognition than they have received. The first Medical Missionary Society ever organized was started in 1838, by Drs. T. R. Colledge, Peter Parker, and Bridgman. Several gentlemen connected with this Society have made names for themselves in the medical history of China. Besides starting dispensaries and hospitals at various places in and near Canton, the advantages of modern surgery were given the Chinese. Dr. Parker, in 1844, performed lithotomy upon a Chinaman, "the first instance in ancient or modern times." In 1847 ether was introduced by Dr. Parker, and in 1848 chloroform was used in the Canton hospitals. In 1875 the first ovariotomy in China was performed at Hong Kong, by Dr. Young. One of the Canton medical missionaries, Dr. Benjamin Hobson, became the first medical bookseller in China. We are told that his books were very popular with the Chinese, and were extensively sold throughout that country and in Japan. As pioneer works in inculcating the principles of rational medicine, they have been undoubtedly of immense service.

Dr. Kerr, who has been at Canton now for thirty years, has been a most industrious laborer in this field. We find credited to his pen original works or translations into Chinese to the number of more than a dozen, besides the editing of a Chinese medical periodical called the *Western Healing News*.

As Dr. Kerr's works include "Treatise on Medicine" (six volumes), a "Manual of Operative Surgery," treatises on Diseases of the Eye, Skin, Hygiene, Vaccination, Syphilis, and Symptomatology, besides a work in two volumes on "Materia Medica," it may readily be supposed that the author is a gentleman of scholarly attainments as well as large productive ability and persistent industry.

Since the foundation of the original Mission Hospital at Canton there have been a score of other similar institutions established in China, and the work is constantly progressing.

AN AMICABLE DISCUSSION OF HOMŒOPATHY.

WE have already alluded to the polite controversy which has been taking place in Boston between regular physicians and the homœopaths of the University School of Medicine. Dr. Conrad Wesselhoeft having last year delivered a lecture on homœopathy before the Boylston Medical Society, Dr. V. Y. Bowditch this year delivered an address on homœopathy before the Hahnemann Society. Dr. Bowditch's address was directed to the answering of a number of set questions propounded by the homœopaths. In answering these questions the lecturer presents the position of rational medicine toward dogmatic medicine in a courteous, yet logical and forcible, manner. We cannot but believe that such efforts as those of Dr. Bowditch will help to infuse into the profession a more fraternal feeling. The splitting of the profession into "schools" lowers us continually in the eyes of the public. Dr. Bowditch reminds us that while individuals disagree, there is a common bond of unity which cannot be ignored by honest men. "We are *all*," he says, "members of a profession which, when regarded in its true light, above the plane of party strife and mere selfish gain, I regard as the finest and noblest of all, and the feeling grows stronger within me with each year of practice. There is that in it far above the mere desire and ability to cure disease—that which can soothe all regrets for possible failure and disappointment in our daily work—I mean the power of human sympathy; the power which bids the young mother silently and gratefully press the hand that helped her in her hours of trial; the power that impels the dying man, at the very last, to turn to him who, though powerless to save, yet, by a word, a look, a touch of the hand, gives strength and courage to one just passing to that 'undiscovered country from whose bourn no traveller returns.' In the midst of discord and disappointment let us keep this thought before us, gentlemen, and at the end perhaps we may be permitted to see our past life, as it were, stretched before us, and feel that we have done our small share toward making our chosen profession what it should be—a blessing to all mankind."

Such sentiments as these should ever be borne in mind by the physician. They will be a better help to a successful life than a whole bookful of worldly wise instructions as to how to dress up "the physician himself."

A TEMPERANCE HOSPITAL.

A RECENT number of the *Lancet* gives an interesting account of the exercises attending the anniversary of the Temperance Hospital in London. This is a general medical institution, where a cardinal principle is the avoidance of the use of alcohol in any form. During the thirteen years of its existence, it has not been found necessary to administer alcoholic stimulants on more than three occasions. In the ten and a half years of its existence up to the year 1884, it had treated fifty-three cases of typhoid fever without alcohol; out of this whole number, five deaths occurred; twenty of the patients were abstainers from the use of alcohol, while the remainder had been drinkers to a greater or less extent. Of the fatal cases, four were non-abstainers. Statistical tables were presented showing the relative results of treatment, with and without alcohol, in acute rheumatism, pneumonia, bronchitis, etc.

While all will admit that alcohol, like all other remedies, is abused, yet we fail to see that the facts narrated with regard to this institution are particularly striking or present any especial lesson. Most of us would be very loath, to say the least, to discard the judicious use of alcohol in either private or hospital practice. The above statistics may possibly show that we could get along with less than we use at present, but that is all. Fifty-three cases of typhoid are not many. The efficacy of any plan of treatment with this number cannot be well demonstrated. The disease is in many localities a mild one, it requires no stimulants; this is the case in some years here in New York; at other times, the disease is from the outset marked by severe prostration, and requires stimulation at once. We have never found anything more useful for this purpose than the judicious employment of alcohol. While we favor all measures designed to promote temperance, we question the utility of applying prohibitory principles to hospital practice.

THE NEW SKIN DISEASE.—Dr. E. J. Bergen, of Hope, N. J., writes: "Referring to your editorial in THE MEDICAL RECORD of August 21st, entitled 'A New Skin Disease,' allow me to say that the disease mentioned is by no means confined to the Western States, although while practising in Kansas I first became familiar with it, receiving in that State the popular name of 'Missouri Mange.' The author whom you quote has given a very correct description of the trouble, and there is no doubt to my mind that, as Dr. Engstad states, the disease is due to a vegetable parasite, as I have repeatedly, during the vesicular stage, found the elongated cells mentioned. The past two years I have seen and treated a number of persons afflicted with the disease, and with uniform good results, employing the following method: First, a thorough washing with soap and water; while the skin is still soft, apply lightly a solution made in the following manner: To two ounces of slacked lime add one pound of sulphur and four quarts of water, adding from time to time water so that after boiling one hour there may be four quarts of the fluid, strain through muslin, and it is ready for use; one application is usually sufficient. The above treatment was suggested by knowing the advantage of washing with an alkaline solution before using sulphur ointment in ordinary scabies.

News of the Week.

NURSES FOR SMALL CHILDREN.—About a year ago a training-school for nurses was opened at the Post-graduate College Hospital. The profession will be interested to know that in connection with the usual advantages offered to pupil nurses, viz., training in the care of adult patients, this school has been able to give a special practice in the nursing of babies and young children in the ordinary infantile diseases—an extremely important division of their work.

MERRITT H. CASH PRIZE ESSAY.—The Medical Society of the State of New York offers to physicians of this State (New York) a prize of one hundred dollars, from the proceeds of the Merritt H. Cash Prize Fund, for the best essay on any medical subject that shall be approved by its Committee on Prize Essays. Essays for this prize must be printed by type-writer or otherwise, and sent to the Committee without any indication of authorship. The names of authors should be endorsed in sealed envelopes accompanying the essays, and bearing upon the outside mottoes or other devices which are duplicated on the essays. Essays for competition must be sent to the Chairman of the Committee, Dr. George F. Shrady, 247 Lexington Avenue, New York City, on or before December 20, 1886, in order that the Committee may have time to examine them and report at the next annual meeting of the Society, February 1, 1887.

"ROUGH ON RATS," AN ARSENICAL POISON.—Cases of poisoning by this preparation are of such common occurrence that it is well to remember that it is made simply of arsenious acid. The antidote is the hydrated oxide of iron, which can be prepared extemporaneously by adding an excess of aqua ammoniæ to the tincture of the chloride of iron. The mixture should be strained, and the magma then washed with water to remove the ammonia. Dialized iron, to which magnesia has been added, will also serve as an antidote. The sale of this preparation ought to be placed under the same restrictions as that of any other active poison.

SPAYERS RUN MAD.—Under this title *Leonard's Illustrated Medical Journal* quotes from an editorial in THE MEDICAL RECORD of last April, which it says was written "in defence of the recent craze for the spaying of women," and adds the comment: "If the arguments of the abortionist, the roué, and the prostitute are to become the arguments of the laparotomist, it is about time gynecology became one of the lost arts." This is very discouraging. Esteemed contemporary, we were on the other side. Read the article again, and try the effect of a second stroke.

THE DEATH OF DR. HERMANN MAAS is announced. Dr. Maas was professor of surgery in Würzburg, and was but forty-four years of age at the time of his death.

MEDICAL STUDY IN JAPAN.—The number of students in the Imperial University at Tokio is said to be nearly one thousand, a large portion of which are students of medicine. Five of the professors in the medical faculty are Germans.

HYDROPHOBIA IN CAMELS.—Several cases of hydrophobia occurred some time ago among a herd of camels in Algeria. The animals exhibited unmistakable symptoms of the disease, but there were no evidences of their having been bitten. A mad horse had gained admittance to the place where the camels were pastured, and it is supposed that the disease was transmitted through saliva which had fallen from the horse's mouth upon the grass, and the camels had received the poison through abrasions in the mouth from which these animals frequently suffer.

A NEW RUSSIAN UNIVERSITY.—The Russian journals report that a private university, reserved exclusively for women, will soon be opened in Moscow. The university will embrace three faculties: philology, mathematics, and natural sciences. Under the latter will be included a course for medical study.

PROFESSOR SEMMOLA, of Naples, has been made senator of the kingdom of Italy. This is an honor which is seldom conferred upon any but politicians and in reward for political services, and is therefore so much the more noteworthy when given in recognition of purely scientific labors.

THE VALUE OF ANTISEPSIS.—A member of the medical profession has published a fee list, in which he estimates the value of his services at the rate of $500 for a non-septic dressing, while a dressing in septic cases is made at the comparatively cheap price of $25.

SOZOLIC ACID.—This substance, called also orthoxyphenylsulphurous acid, is said to possess superior antiseptic properties. It has been used internally as well as externally in erysipelas, small-pox, pneumonia, phthisis, and other affections, with, it is claimed, excellent results.

A NEW JOURNAL.—The first number of the *Jornal de Medicina e de Pharmacia* appeared on July 3d. It is published in Paris in the Portuguese language, and is intended for circulation in Brazil. The editor is Dr. Simeon da Fonseca.

MEDICAL PRACTICE IN BELGIUM.—A complaint has been made in the Belgium Senate that foreign physicians are allowed to practise in that country without obtaining a diploma from a Belgium university, thereby doing an injury to the native practitioners. The Senate was requested to pass a law to prevent physicians with foreign diplomas from practising in Belgium.

CREMATION IN NEW SOUTH WALES.—In the Legislative Council of New South Wales, on June 3d, Dr. Creed introduced a bill entitled, "To authorize the establishment of sites and apparatus for purposes of cremation." The object of the bill is to legalize cremation under certain necessary restrictions.

HONORS TO AN IRISH SURGEON.—The Earl of Aberdeen, Lord Lieutenant of Ireland, recently conferred the honor of knighthood on Mr. Stokes, President of the Royal College of Surgeons in Ireland.

CHOLERA IN JAPAN.—Recent reports state that cholera is prevalent to an alarming extent in Yokohama and Tokio, and also in Corea, in which country the mortality from the disease is very great.

AN UNTIMELY DEATH.—A female physician, Mlle. Ribard, who went with the expedition that accompanied Paul Bert to Tonkin, has died of dysentery in the hospital at Quang Yen. She made a specialty of diseases of the eyes, and had been very successful, having cured many of the mandarins, and was just about to perform an operation on the king's mother when she was prostrated by the disease which terminated her life.

ETHOXYCAFFEINE, a derivative of caffeine, discovered by Filehne, has been used by Dujardin Beaumetz in the treatment of migraine, with, it is said, very good results.

NIGHT MEDICAL SERVICE IN VIENNA.—Baron Mundy has recently induced the municipal authorities in Vienna to establish a night medical service similar to that in existence in Paris and New York.

A NIGHT PHARMACEUTICAL SERVICE.—The municipal council of Paris has decided to establish a night pharmaceutical service. In order to procure the medicines prescribed by the physicians of the night medical service. the patients must apply to the nearest police station, whence they are directed to the nearest apothecary whose name is inscribed upon the list. The medicines will be paid for by the city if the patient's circumstances are such as to require it; but if able, the patients must pay for the prescription, and thirty cents in addition as a compensation for the druggist's night work.

HYDROPHOBIA is said not to exist in Lapland; but two dogs brought from that country, having been inoculated by M. Pasteur, contracted rabies, thus proving that Lapland dogs are not refractory to the disease.

SMALL-POX IN ZURICH.—In May, 1883, owing to the clamor of the anti-vaccinationists, the authorities at Zurich abolished compulsory vaccination. For the twenty-seven months prior to this time there had been but 7 deaths per 1,000 from small-pox. In 1884 there were 11 deaths per 1,000; in 1885 there were 72, and in the first three months of 1886 for every 1,000 deaths from general causes there were 85 from small-pox.

MEDICINE IN TENNESSEE.—It is said that incompetent physicians and quacks of all kinds are flocking in great numbers to Tennessee, and in some places actually supplanting the regularly educated medical men.

POOR CHICAGO.—The St. Louis *Weekly Medical Review* says that Chicago maintains six medical societies, seven medical colleges, and eight medical journals.

INEBRIETY cannot be prevented by throwing the responsibility on the inebriate, and punishing him for this, as if for crime. He is a sick man, and must be taken out of his surroundings and fully quarantined until he can recover.—*Quarterly Journal of Inebriety.*

A NEW CAUSTIC.—It is reported that a mixture of calomel and benzol makes a very efficient caustic for the removal of epitheliomatous growths.

MEDICAL RAPACITY.—The London *Standard* tells of a surgeon who demanded a hundred guineas for a slight operation performed in his office, the entire visit lasting only fifteen minutes. After coming down successively to fifty and twenty-five, the surgeon finally accepted ten guineas on account.

IODOFORM FOR ARMY USE.—Professor Mosetig-Moorhof considers that iodoform is the best antiseptic in time of war. It does not irritate the wound, and its action is invariable and permanent. At Belgrade, where this antiseptic was used, there were only 19 deaths among 824 wounded. Iodoform is less caustic than other antiseptic substance.

TREATMENT OF BURNS.—It is said that essence of peppermint painted over a burn will quickly relieve the pain.

YELLOW FEVER AT NEW ORLEANS.—A Norwegian vessel from Aspinwall recently arrived at Ship Island quarantine, New Orleans, with six of her crew of twelve men down with yellow fever. No danger of the spread of the disease exists, as the vessel was quarantined and all necessary precautions taken.

THE PASTEUR INSTITUTE has received a donation of 100,000 francs from the Russian Government.

DISSECTION IN WASHINGTON.—President Cleveland has vetoed the bill legalizing dissection in the District of Columbia, on the ground that the bill failed to provide sufficient safeguards against the delivery of bodies to unauthorized persons.

MASSAGE IN GLYCOSURIA.—Finkler recommends massage in the treatment of diabetes. He has employed the method a number of times, and asserts that the quantity of sugar is considerably lessened, even when the patients continue with a mixed diet. Profuse perspiration begins shortly after the commencement of treatment, and the patients so treated almost always increase in weight.

OXALIC ACID AS AN EMMENAGOGUE.—Dr. Poulet recommends oxalic acid very highly in the different forms of amenorrhœa, and says that no other emmenagogue can compare with it in the certainty of its effects. He uses the following preparation: Oxalic acid, 30 grains; syrup of orange-peel, 2 ounces; water, 6 ounces. The dose is a tablespoonful every hour.

VALERIAN IN DIABETES.—According to M. Demange valerian is an excellent remedy for use in diabetes insipidus. It is given in doses of from two to four drachms a day.

CONGENITAL ANIDROSIS.—At a recent meeting of the Obstetrical Society of Boston, Dr. C. E. Stedman reported a case of eclampsia, in which he had given three doses of one-third of a grain each of pilocarpine, without inducing perspiration. The hot-air bath was also ineffectual. He afterward learned that the patient never perspired, even when in health.

A NATIONAL ORTHOPÆDIC ASSOCIATION.—The *Weekly Medical Review* enters a protest against the movement which is said to be on foot, to form a subsection of orthopædics to the section of Diseases of Children of the American Medical Association. It says that orthopædic surgery is of sufficient importance to deserve a section to itself, and proposes the formation of such a section, or else the establishment of a national society of orthopædists. The latter would seem, under the circumstances, to be the more feasible plan.

NOT A GOOD OPENING FOR PHYSICIANS.—There would seem to be danger of a plethora of physicians in Kansas City, for the *Medical Index* of that city says that nearly fifty physicians have settled there during the past two months.

THE SECOND CONGRESS OF RUSSIAN PHYSICIANS will be held in December of this year, in Moscow. The president of the association is Professor Sklifassovski.

A CURE OF STRICTURE BY SUGGESTION.—M. Ramey, of the Military Hospital of Saint Martin, recently reported a cure of spasmodic stricture of the urethra by hypnotic suggestion. Internal urethrotomy had previously been performed without relief. The patient was hysterical, and could be readily hypnotized.

A HANDSOME BEQUEST.—Dr. Orjekhovski, who died recently in Warsaw, left over 200,000 roubles to a charitable society of that city.

DR. FERREIRA DOS SANTOS, who was commissioned by the Brazilian Government to study Pasteur's methods, with a view to the establishment of an institute for the prevention of rabies in Rio de Janeiro, has arrived in Paris. He brought with him a letter to Pasteur from Dom Pedro II., and also the grand cross of the order of the Rose.

M. BROWN-SÉQUARD has been elected titular member of the Académie des Sciences, having received twenty-eight votes more than his competitor, M. Germain Sée.

GASTRIC CATARRH IN MOSCOW.—An unusually large number of cases of acute catarrhal gastritis have occurred in Moscow in the last few months. No cause has been found for the prevalence of the disease. Bacteriological examinations of the excretions have given negative results.

CONDEMNATION OF A MIDWIFE.—In Altenburg, recently, a midwife was sentenced to imprisonment for two years, because she advised the parents of an infant suffering from ophthalmia not to seek medical advice. The only treatment consisted in local applications of chamomile tea, and the child lost one eye in consequence.

AUSCULTATORY PERCUSSION.—In an excellent historical article on auscultatory percussion in *Lo Sperimentale* for July, 1886, by Dr. A. Bianchi, the author gives full credit to Drs. Cammann and Clark for priority in the use of this diagnostic method. Auscultatory percussion has been rather extensively practised of late in Italy, but the first writers on the subject did not seem disposed to acknowledge the claim to priority of the American physicians.

A CHAIR OF EVOLUTION.—Herr Paul v. Ritter, of Basle, has signified his intention of leaving 300,000 marks to the University of Jena, for the purpose of promoting the study of philogenetic zoology according to the Darwinian theory. He will give 130,000 marks at once, and the balance will be paid after his death. Professor Haeckel, of Jena, an enthusiastic teacher of evolution, proposes to use the gift for the establishment of a professorship of zoology to be called, after the donor, the Paul v. Ritter Chair of Zoology.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

MEETINGS OF SECTIONS.

(Continued from page 247.)

SECTION IN SURGERY.

(Special to THE MEDICAL RECORD.)

THURSDAY, AUGUST 12TH—THIRD DAY.

THE President of the Section, MR. ERICHSEN, took the chair shortly after 2 P.M.

DR. GEORGE HARLEY, F.R.S., then read two papers on

HEPATIC PHLEBOTOMY AND PUNCTURE IN HYPERTROPHIC CONGESTIONS OF THE LIVER.

Only one paper on the above subject had been announced, but Dr. Harley divided his paper into two, and thus secured fifteen minutes for each, a proceeding which called forth an indignant protest from one gentleman present.

In his first paper he described two

CASES OF HEPATIC PHLEBOTOMY,

in which he had withdrawn about a pint of blood from the liver by a trocar. These cases were published a month or two ago, and have already been referred to in THE MEDICAL RECORD.

In his second paper he compared

THE PUNCTURE OF GLISSON'S CAPSULE

to that of the tunica vaginalis in orchitis (which, however, I may remark, is not much practised), to acupuncture in sciatica, and to incising a whitlow. He described cases in which he had performed the operation, and said he used trocars varying in size from Nos. 2 to 5 of the liver trocar. Each one was from one to two inches in length. In one case, although the liver was as hard as a fibroid tumor, diminution in size followed the operation and the patient thought his liver became much softer. One of his cases was that of a gentleman who had lived many years in the tropics (South America). Being very wealthy, he had lived very freely, partaking of champagne unsparingly. As a consequence of this he began to suffer from hepatic symptoms, and when he came under treatment was suffering severely. He was anxious to obtain immediate relief, as he desired to leave England shortly.

THE OPERATION OF PUNCTURE OF THE LIVER

was proposed to him, to which he readily assented, and his liver was accordingly punctured in several places. He received great benefit from the operation, and returned to South America in a much better state of health. The improvement continued for some months. He then began to indulge in excesses again, thinking he could do so with impunity. This caused a relapse, and he had again to place himself under treatment.

MR. KNOWSLEY THORNTON then read a paper on

THE SURGERY OF THE LIVER,

and related some cases in which that viscus had been surgically dealt with. In one of his cases, what had been supposed to be ovarian disease proved to be a large, single hydatid cyst of the liver, of such a size that the gall-bladder was displaced into the right iliac fossa, had become adherent to the uterus, and (before the operation) was taken for the right ovary. The cyst was cleared out, the sac then sponged out with pure tincture of iodine and sewed up with the same sutures as those uniting the abdominal wound. The patient did well. Another case was that in which puerperal peritonitis had caused adhesion of the gall-bladder. Having related a case in which he had successfully removed a number of gall-stones from the gall-bladder, Mr. Thornton described one in which he had opened an abscess of the liver through the pleura, having previously sutured the two layers of the pleura together, so as to form a channel through which the pus might pass without entering the cavity of the pleura. He approved of antiseptics and, among them, he preferred a weak solution of corrosive sublimate. He believed in using large quantities of (weak) antiseptic solutions, so as to wash away every diseased particle. Where you could not destroy the virus, attenuate it. The liver should be treated surgically in the same manner as other organs.

MR. WILLETT then read a paper on

CHOLECYSTOTOMY,

of which he was the author jointly with Mr. W. A. Meredith. Mr. Willett described a case occurring at St. Bartholomew's Hospital, London, in which Dr. Gee thought obstruction of the common hepatic duct had occurred. The abdomen was opened, and the gall-bladder was found to be distended with sixteen ounces of clear serum, which were drawn off. There was complete obliteration of the common duct. For about a week an almost continuous flow of fluid took place from the opening made into the gall-bladder. Should

CUTTING INTO AND DRAINING THE GALL-BLADDER

be performed until aspiration had been tried, especially when there was a possibility of finding the duct obliterated? Mr. Willett suggested

THE DESIRABILITY OF MAKING AN ENTERO-CYSTIC FISTULA,

so as to render the operation complete. It had occurred to him in this case that he might do this, but he refrained. In future cases of the kind he would certainly do so. There were two sites at which this fistula might be formed. One was at the junction of the first and second parts of the duodenum; the other was where the ascending joined the transverse colon. From a physiological point of view the duodenal site was preferable, but the operation was more difficult of performance there, the space in which to work being smaller and deeper. The physiological reasons were also less valid than might be supposed, because examination of the secretion from the liver in these cases showed the biliary constituents to be greatly diminished in amount, the secretion being, in fact, little but serum. It was much easier to make a fistula into the colon. The colon and the gall-bladder lay side by side, and almost in the line of the incision. The artificial opening into the gall-bladder should be made at its lowest point, as there was then a probability of the gall-bladder ultimately contracting and forming merely a duct.

MR. HOWARD MARSH then read a paper on

A CASE OF ABSCESS OF THE LIVER, OPENED BY FREE INCISION.

The abscess proved to contain thirty-six ounces of pus. He thought the operation might be safely performed on children. Abdominal surgery in children, he remarked, was as safe as in adults. Ovariotomy, removal of the kidney, gastrostomy, and operations for the relief of intussusception, had all been successfully performed on children. In operating on children it was desirable to avoid loss of blood as much as possible, and also that the operation should be completed with as little delay as possible.

Mr. Lawson Tait (Birmingham) then read a paper on

THE SURGICAL TREATMENT OF DISEASES OF THE LIVER.

Mr. Tait had operated on the liver in fifty cases in all. He exhibited a table of his cases, and made a few remarks on some of them. There were seven cases of

EXPLORATORY INCISION INTO THE LIVER,

of which one terminated fatally. Dr. Clifford Allbutt and himself had thought they felt a distended gall-bladder, but at the time of the operation they found what they had taken for the distended gall-bladder to be a colloid mass in the liver. He had performed hepatotomy in thirteen cases, all of which recovered. Of this number, nine were cases of hydatids, two were cases of cysts, one was a case of gall-stones, and one was one of tumor of the liver. The remaining cases (thirty) were all cases of

CHOLECYSTOTOMY.

One of those was a case of cholæmia, two were cases of distended gall-bladder, one a case of suppurating gall-bladder, two were cases of gall-stones crushed, and the remaining twenty-four were cases of gall-stones. Out of the thirty cases, one (a case of gall-stones) ended fatally, and two died since the operation from the progress of cancer of the liver. One of these was a case in which the operation was undertaken for distended gall-bladder, and the other was one in which it was done to remove gall-stones.

Mr. Tait said the secondary results were successful in all but one of the forty-six patients who recovered, and in that one jaundice had been present. Where jaundice was present, his experience was that the secondary results were often not satisfactory, and he therefore looked on cases in which jaundice was present with grave suspicion. He referred to a case in which he had operated on the kidney and removed a mass of gall-stones which had found their way down. The disease was really hepatic in origin, although it was cured by operating on the kidney. His thirteen cases of hepatotomy had been performed mostly for dilatation of the liver. In one case of gall-stones for which he performed hepatotomy, he

REMOVED A PIECE OF THE LIVER SUBSTANCE

in order to afford space for the removal of the gall-stones.

Mr. Erichsen having said a few words, the discussion was opened by Dr. Royle (Manchester), who described a case in which sixty gall-stones were found in the gall-bladder, and the patient had never passed a gall-stone and never had a symptom of any.

Dr. David Boys Smith (Netley) said puncture of the liver had been claimed by Dr. Harley as a novel operation, but it was the most ancient operation in the world. It had been performed by the Chinese for ages, and was systematically done in China now. He had had twenty-five years' practice of it. He described a case in which, while searching for pus, the liver was punctured in all directions. He did not find any pus, but the patient was benefited. As one of the professors at the Army Medical School, Netley, he protested against Dr. Harley's insinuation about the erroneous teaching of the schools as to the treatment of hepatic affections. He wished Professor Maclean had been able to be present, as he would have said how many times he had done it. He would, however, read one sentence from a letter from Dr. Maclean to Dr. Harley. Dr. Maclean wrote that he had "often done it and withdrawn five or six ounces of blood with benefit." Dr. Smith concluded by referring to a case in which the liver had been punctured and a fatal result (from hemorrhage) had ensued.

Dr. Cullimore claimed for Dr. Harley the credit of the operation, and defended the

PRACTICE OF TAKING BLOOD FROM THE LIVER.

He said he had himself suffered twice from abscess of the liver, and leeches placed over the liver gave him great relief.

Mr. Willett, Surgeon-Major Black, Mr. Prankerd, Dr. Ewart, and Dr. Johnson (late of Shanghai) also spoke and discussed the treatment of hepatic disease, both medically and surgically. Some of the speakers thought surgical measures should not be adopted until mercurials, salines, and other remedies had had a fair trial.

Dr. George Harley then replied. He repudiated the statement that his idea was not original.

ACUPUNCTURE OF THE LIVER

had frequently been done. So had exploring for an abscess. But this was not hepatic phlebotomy. Dr. Boys Smith had referred to Dr. Maclean. He thought the latter ought to ask to be saved from his friends. He had in his hand the letter from Dr. Maclean to himself to which Dr. Smith had referred, and from which Dr. Smith had quoted one sentence. What Dr. Maclean did say was that he had "with a needle drawn a few ounces of blood from the liver." This was a very different thing from the performance of hepatic phlebotomy as advocated by himself. As to his statement as to the teaching of the schools, he could only say that he had studied five years in the schools of England and Scotland, and six years on the Continent, and had never yet been taught to operate on the liver. It was always laid down that operations on the liver were not to be attempted. He had been taunted with having only two cases of hepatic phlebotomy, and with not trying other remedies. The fact was, patients were not to be met with every day who would submit to the operation.

As to the second objection, in his cases *everything* had been tried—mercurials, salines, and every conceivable remedy—and without effect. In one of his cases it was only when the patient was much reduced, suffering from dropsy and unable to stand, that permission to operate was given. He operated on her in that condition simply because he could not get leave to do so before.

Dr. Simon Fitch (Nova Scotia) then read a paper on

THE DOME-TROCAR AND A CURIOUS QUESTION OF PRIORITY.

and Associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the Enlarged Prostate.

Dr. Fitch showed his trocar and explained the method of using it. At the conclusion of his demonstration a rather lively passage-at-arms took place between him and Dr. Ward Cousins, a Vice-President of the Section. The latter said it was the same as his own trocar (barring two trifling modifications, which he mentioned), and he was much obliged to Dr. Fitch for taking up his idea. Dr. Fitch rejoined that he should be very glad to see any book or pamphlet in which Dr. Cousins had described his trocar, and asked how long it was since Dr. Cousins brought his trocar out? Dr. Cousins having admitted that it was only a few years, Dr. Fitch rejoined that his was fifteen years old, and, on Dr. Cousins retorting that he should have brought it out before, said he had. It was described in the "Proceedings of the International Medical Congress at Philadelphia" (1876), and figured in a London surgical instrument-maker's catalogue for 1871. The whole scene was most amusing. No one, however, could imagine for one moment that Dr. Cousins had really appropriated Dr. Fitch's idea; his indignation was too genuine. Dr. Cousins is the inventor of so many useful appliances that he can well afford to lose the credit of one.

Mr. Edmund Owen then read a paper on

PSOAS ABSCESS; WHEN AND HOW TO OPEN IT.

Mr. Owen said there was no disease the treatment of which had derived a greater impetus from the introduction of antiseptics than psoas abscess. By antiseptics he did not mean the use of the spray. The spray was now cooling down in more senses than one, and the surgeon did not now have to look through a cloud of carbolic vapor at his patient. By the use of antiseptics he meant antiseptics as used by the great masters in surgery, whether by Tait, Gamgee, Savory, or Lister. Twenty years ago every surgeon preferred to leave a psoas abscess alone so long as it remained unopened. Stanley, writing forty years ago, said a psoas abscess might disappear. Could it? Mr. Owen said that in an extensive out-patient experience, extending over years, he had only seen one case in which, after a fusiform tumor had been detected ascending along the iliac fossa, he had seen it disappear. Aspiration was useless, for it refilled. When evacuation of the abscess was performed, it should be done thoroughly, and no useless temporizing measures made use of. During delay the pus would be burrowing out for itself an extensive ramifying cavity. A free anterior and posterior opening should be made, and the wound thoroughly drained. The sac should be washed out with a warm antiseptic lotion, and a drainage-tube the size of a cedar-pencil passed through. The wound should be covered with sublimate gauze, then some oakum placed over it, and the dressings changed as seldom as possible. He had employed as the antiseptic lotion a warm solution of corrosive sublimate (1 in 1,000). He should, however, in future discard the use of the sublimate, as he had had a case which died in four hours with black urine, due, he believed, to the absorption of the sublimate. Mr. Owen, in concluding, summed up his conclusions as follows: 1. Spontaneous absorption of psoas abscess is impracticable. Sooner or later it must be evacuated, either by nature or art, and the advantage is on the side of art. 2. The sac should be opened both in front and at the back, and irrigated. For a small abscess a single opening at the back might suffice. 3. Antiseptics should be employed. 4. The operator should bear in mind that pus might collect on the opposite side after evacuation of the abscess. If any rise of temperature take place, a second abscess should be suspected, and, if found, evacuated at once. Bilateral abscesses should be attacked simultaneously, as their cavities frequently communicate. In reply to a query from a member as to the source of his method, Mr. Owen replied that it was neither English, French, Scotch, nor Italian, but Welsh, thereby signifying that the idea was his own, and that he had not borrowed it from anyone.

Mr. William Adams then read a paper on

THE TREATMENT OF CONGENITAL DISPLACEMENT, THE SO-CALLED CONGENITAL DISLOCATION OF THE HIP-JOINT, BY LONG-CONTINUED RECUMBENCY AND EXTENSION.

A model of Mr. Adams' new extension couch was exhibited in a room adjoining that in which the meetings of the Section in Surgery took place.

SECTION IN OTOLOGY.

Wednesday, August 11th—Second Day.

ADVANCES IN OTOLOGY.

Mr. G. F. Hodgson, of Brighton, delivered his Presidential address, in which he traced the history of the progress of this department of surgery during the last half-century, and concluded by expressing a hope that the Section would not suffer by being presided over by a general practitioner.

Dr. Grant then read a paper on

PULSATING TINNITUS,

and another on "The Use of the Tuning-fork." In some remarks on this Dr. Erskine explained Hartmann's method of recording deviations of hearing-power. And Dr. Ellis proposed to relate a case and exhibit the patient at the dispensary the next morning, when cases were to be exhibited by others.

Mr. Cresswell Baber was then called upon for his paper on

THE EXAMINATION OF THE NASAL CAVITIES FROM THE FRONT,

which he read, pointing out as he went to the appearances to which he most wished to draw attention on enlarged diagrams, which he had had copied on a suitable scale from the illustrations to his recent work on the nose. He drew particular attention to the tubercle of the septum, and the manner in which this part causes variations in the image. This paper was well received, and Mr. Spencer Watson congratulated the author on the accuracy of his diagrams and the care which he had taken in recording graphically so many different images.

Mr. Lennox Browne said he had found great difficulty in representing the anterior image, and he did not think that any considerable success had been reached in such conventional diagrams of this part. At any rate, they were far less useful than those which were made of the larynx, and he fancied they would not be of much service to the general practitioner.

Dr. Grant thought that the section of the nasal cavities exhibited by Mr. Baber would afford a more satisfactory basis for recording cases than the view obtained in anterior rhinoscopy.

Mr. Baber replied that his diagrams were not intended so much for the general practitioner as for those who devoted much attention to diseases of the nose, and he had therefore brought them before the Section of Otology; and he handed round a sheet of clinical outlines intended for recording such cases on which, besides the anterior view, there was also a diagram of the posterior image as well as the sections which Dr. Grant preferred; and as they were easily detached, any or all could be used as found convenient. As Mr. Baber had mentioned that he had recorded on his diagrams between three hundred and four hundred cases, and as neither of his critics professed to have used them once, the impression conveyed was that the objections were futile.

Dr. Greville Macdonald then read a paper on "The Functions of the Nose." It was of quite an elementary character, and indeed could scarcely be otherwise, as the writer has only lately begun to study the subject.

Dr. Ellis then related a case of "pulsating tinnitus," and proposed to exhibit the patient the next day.

The Section then adjourned.

SECTION IN THERAPEUTICS.

Wednesday, August 11th—Second Day.

Dr. Lauder Brunton delivered the address. He recognized four stages in the development of medicaments: In the first crude drugs were employed, prepared in the roughest manner; in the second these were converted into more active forms, as extracts or solutions; in the third active principles were employed, as morphine and quinine; in the fourth we try to make substances possessing the action we desire. We are now just entering on what may be called the "iron age of pharmacology," which began, about twenty years ago, with the researches of Fraser and Crumbrown upon the connection between chemical constitution and physiological action. He then entered upon a curious and somewhat strange analogy between the flesh-hooks of Shiloh and the qualities of drugs—which illustration he labored at for a considerable part of the address. He concluded with a reference to

the small amount of pain inflicted upon animals, never wantonly and never carelessly, comparing that with the suffering endured by patients, and thus justifying experiments which have been denounced by fanatics, while in reality they advance the means of relieving pain and prolonging life, not only in man but in animals themselves.

PROFESSOR OSCAR LIEBREICH then read a paper on

LANOLIN,

the new fatty substance with which his name is associated, in which he dwelt upon its physical properties and therapeutical uses. He did not profess that it was an absolute novelty, for it had been employed at a very early period, but only in a very repulsive form. In reviving its use he has obtained it in a state which leaves nothing to be desired, and the large quantity of water with which it will unite and the great readiness with which it will pass through the integument, carrying with it the medicaments with which it is charged, place it at the head of all substances for the basis of all ointments. Specimens of lanolin—pure and impure—were handed round, and the President thanked the learned professor for his paper.

DR. SHOEMAKER, of Philadelphia, read a paper on

HAMAMELIS VIRGINICA,

in which he expressed considerable confidence in the value of this drug.

DR. EDWARD MACKEY, of Brighton (Vice-President of the Section), then read an interesting paper on

THE USE OF RESORCIN IN GASTRIC AND CUTANEOUS DISORDERS.

He drew attention first to its antiseptic properties, pointing out that a two per cent. solution retards putrefaction, but does not irritate the tissues. Sometimes a five per cent., or even a ten per cent., solution may be employed, but then considerable irritation may be excited, while the weaker lotions are generally effectual. Internally he had usually employed five-grain doses. It is not nasty, but the taste is easily tolerated by almost all patients. He usually gave it in water, with a little glycerine, or in chloroform water; doses of twenty or thirty grains have been given, but they give rise to febrile disturbance, while from thirty to sixty grains cause giddiness, prostration, anxiety, collapse, and unconsciousness. He therefore did not approve such doses. It was quite true that full doses lower the temperature, but the effect is only temporary and of doubtful advantage, so that resorcin may be said now to have passed out of the list of antipyretics. Two cases of gastric ulcer, treated in the County Hospital, with five-grain doses three times a day, began to improve as soon as the resorcin was taken, and completely recovered under the treatment. In one of these anæmia was so extreme that he had resorted to hypodermatic injection of dialysed iron, as employed by Dacosta. Twelve cases of gastric catarrh among the out-patients of the hospital, varying in age from twenty-seven to fifty, all of whom had been vainly treated by bismuth, magnesia, soda, prussic acid, and the usual prescriptions, soon got better under five-grain doses of resorcin *ter-die*. The drugs seem to stimulate and disinfect the mucous membrane. In children's diseases he had not found it so successful; he had given it in doses of two and three grains to children, but found that it neither relieved diarrhœa nor disinfected the evacuations. In skin diseases it was a valuable parasiticide; a ten per cent. solution sometimes relieved psoriasis. On ulcerating mucous surfaces it improved the condition and disinfected the discharge, as for example in otorrhœa.

MR. WILBERFORCE SMITH said that it seemed to act like carbolic acid, and he would like to ask whether the author had separated the effect from that of physiological treatment, which was often so effectual. Dr. Mackey replied that he had already pointed out in the paper the differences between resorcin and carbolic acid, the most important being that it was decidedly less irritant. As to physiological treatment, of course, his two in-patients had the benefit of rest, proper diet, and hospital care; but among the out-patients there was little opportunity for securing such benefit, and all we could do in such cases was to give physic, as the patients could not, as a rule, comply with other directions.

A DISCUSSION ON ANTIPYRETICS

was then introduced by DR. CARTER, of Liverpool, who had a number of charts recording cases illustrative of his remarks. He placed quinine at the head of all antipyretics, especially where any malarial influence was suspected, and he saw many malarial fevers in the Liverpool Infirmary. He usually gave a few doses of ten grains, and did not approve the enormous quantities often advised, and would fear to give them where a tendency to coma was observed. In some of these rare cases, when the temperature suddenly ran up to 106° F., he preferred cool baths, and perhaps a blister to the nape of the neck. In one instance he saw sinapisms applied to the calves without rousing the patient, although they had been so assiduously used that ulceration ensued and lasted a long time. Salicylate of soda he found very certain in its effects and the best remedy in rheumatic cases, but it had the disadvantage of sometimes causing great depression, and therefore for non-rheumatic patients he did not use it. Antipyrine he had found very effectual, but the effect was evanescent, and therefore the doses had to be given at frequent intervals; he did not give large quantities, but contented himself with ten grains every hour at first, and when the temperature had been reduced, at longer intervals. He mentioned some interesting cases, showing the certainty with which this drug will lower the temperature; one or two of which had converted a house surgeon, who was very sceptical of this, into a full believer. Curiously, he found antipyrine, though generally so certain, of no use whatever in severe febrile anæmia, and this corresponds with the observation that has been made that it produces no effect on the blood; the form, color, and other properties of the globules being unaltered by the drug. In other cases he considered antipyrine the best agent, and likely to become the general favorite.

DR. LEECH thanked Dr. Carter for the careful manner in which he had introduced this discussion, and suggested that each antipyretic may have its own sphere of action. In anæmia all of them frequently failed; on the whole, quinine is the best; he had given the large doses recommended by Liebermeister, and endeavored to time the doses in the manner advised by him. He thought that we should carefully study the duration of the action of our remedies, and that this was especially desirable in using antipyretics.

The time having now expired, the further discussion of this subject was adjourned.

DR. PROSSER JAMES read his paper on

LOCAL ANÆSTHESIA.

He alluded to former efforts by himself, as well as others, to obtain substances which by local application would produce anæsthesia. Referring to Sir Erasmus Wilson's and Dr. Bill's discovery of the power of carbolic acid on the skin, he had followed up its use, largely diluted, on mucous membranes, and shown it to be a most valuable anodyne, as stated in his works on "Sore Throat," and on "Laryngoscopy." Further, he had employed it in combinations.

The sulpho-carbolates fail, but he had succeeded with simple carbolates of sodium and other bases, and now introduced them as valuable remedies, especially in the form of spray. Cocaine had then been introduced, and its place and power have become recognized. On account of its cost he had endeavored to find a substitute in caffeine, theine, theobromine, guaranine, etc. He had prepared a number of salts of these bases, forty or fifty of

which he exhibited last year in the annual museum, at Cardiff.

His method of ascertaining the effect of drugs on mucous membranes was to select a suitable patient, examine the larynx, then apply a solution and again examine at frequent intervals. In this way he had made many experiments, as, *e.g.*, those on expectorants, related in his work on "Respiratory Therapeutics," and which confirm those of Rossbach and Petronne on animals after section of the trachea. Referring to the action of cocaine, he had shown that it blanched the part to which it was applied, an observation simultaneously made by American observers. This effect he had sometimes utilized in local congestion, and he related a remarkable case in which highly vascular, warty growths had disappeared from the larynx after repeated applications of cocaine and sprays of a salt of caffeine. He then became desirous to determine whether any change in the local temperature could be proved to occur coincidently with the diminished vascularity. Of course the larynx could not be employed for such a research, and he was driven to experiment on the male urethra. A table of temperatures in this part was read, showing that in some instances a fall of fully 1° F. occurred when the urethra was rendered anæsthetic by cocaine. Similar, but less decisive, results were obtained by salts of caffeine and other alkaloids, and the author caused some amusement by remarking that his experiments, though so far decisive, were not very numerous, as patients with disease of the urethra did not fall in his line of practice; while, too, a healthy surface ought to be used, and gentlemen were not easily persuaded to submit to experiments on this part. He thought the facts noted worth reporting to the Section.

The President thanked Dr. Prosser James on behalf of the Section for "his very interesting and valuable communication," and suggested that the discussion on it might very well be taken in connection with that on analgesics, which came next, if agreeable to the author and audience. This suggestion, being unanimously approved, was adopted, and the debate on analgesics began. The

DEBATE ON ANALGESICS

was introduced by Dr. Spender, in a paper rather too long for such a purpose, but full of interest. After some introduction, he said we come to close quarters with pain in neuralgia, calculus in the ureter, gall-stones, gout, etc., and patients demand relief at all cost. In such cases opium, or its alkaloid, still remained our chief agent. In supra-orbital pain, however, it was of little use, while ten grains of quinine, followed by a few doses of five grains, would cure. Gelsemium or chloral were not to be compared in these cases, especially when, as usually, there is a touch of malaria present. Again, in night pain in a syphilitic patient, analgesics of such a kind give only temporary relief, while iodides will, after a few doses, permanently remove the suffering. So salicin and arsenic are relatively indirect analgesics in other cases. Iron, in myalgia and neuralgia, has a similar relative value. Bromides only dispose to sleep, and in slight pain appear analgesic; but if the pain is sharp enough to baffle sleep, it defies bromides. They bring the system into a placid state disposing to sleep, but if this is disturbed the analgesic charm is broken. He referred to doses, and illustrated the subject by the different effect in various quantities of tartar-emetic, of opium, and morphia. Bleeding relieved vascular tension. Ergot raised motor force, and possibly sensation. He next urged that we economize our power by combining drugs, instancing morphia given with bromides, aconite with quinine, hemlock with several others, quinine with arsenic in herpes zoster, or with colchicum in gout, etc. He thought that, as surgeons have their instruments all in place, so as to find just what they want, so physicians should have a cupboard where all their analgesics could be seen in order at a glance, with hypodermatic syringes and other means of employing them. He concluded with a recognition of psychical analgesics, and the importance of recognizing not only the mental influence which by the sight of the dentist dismisses tooth-ache, but the spiritual comfort which the presence of a wise, christian physician may insensibly impart.

The President thanked Dr. Spender, and asked Dr. Brown-Séquard to follow.

Dr. Brown-Séquard then gave an account of his discovery that a jet of carbonic acid gas, or of the vapor of chloroform, projected forcibly on the larynx, produced anæsthesia. Other agents will do it, but these are the best. After the larynx is thus anæsthetized the influence extends to other parts, and he has rendered animals insensitive to pain all over by this method. The effect lasts a long time—twenty-four or even thirty-six hours—and that without the least effect on consciousness or interference with any other function. He considered it due to an effect on the superior laryngeal nerve. When this nerve was divided, on one side there was no anæsthesia at all. He divided both and scarcely any effect occurred on either—only just enough to be attributed to the other less important nerves.

The higher the scale of the animal, the greater the effect. He had tried to apply it to man and had succeeded on himself, but the effect of projecting CO_2 on the laryngeal membrane is so exceedingly disagreeable, he had found no one else able to endure it for a long enough time, and, of course, precautions must be taken to prevent its inhalation. He was still, therefore, searching for an agent suitable for use on mankind. Galvanism of the nerve sometimes acted in the same way, but was very uncertain, and therefore useless.

Dr. Brown-Séquard's speech was listened to with the greatest attention, and he concluded amid most hearty plaudits.

Professor Liebreich, at the request of the President, next spoke. He drew a diagram on the blackboard to illustrate his views of the action of chloral and other ter-chlorine compounds, which, he said, began their action in the brain. If an agent next acted on the medulla and then on the heart when a toxic dose was given, life ceased when the heart no longer pulsated. If the heart preceded the cord, life could be maintained by artificial respiration.

He gave several illustrations, and showed their chemical relations to each other.

Professor Leech agreed with much that Dr. Spender had said, but differed on dosage, and urged very small and very frequent doses.

Dr. Mackey, V.P., who had in the meantime assumed the chair, observed that the allotted time for the debate had nearly expired, and unless others desired to speak he would ask Dr. Prosser James and Dr. Spender to reply. Dr. Spender had been called away, and Dr. Prosser James expressed his great interest in the speeches and appreciation of the important statements which had been elicited, and regret that others did not join in the debate.

Dr. Mortimer Granville next read a paper on

THE RELIEF OF PAIN BY MECHANICAL VIBRATION OR PERCUSSION.

He no longer considered his method a novelty, as he had found that Mason Good spoke of percussion in his time as an established method of treating pain, and in early times the principle had been applied. His percuteur, however, which he exhibited, placed an easy and effectual method of using percussion in the hands of all.

Mr. Jessup read a paper on

THE EFFECTS OF COCAINE IN OPHTHALMIC PRACTICE,

in which he pointed out that it is sometimes injurious. It might, he declared, produce glaucoma, and he found it increase exophthalmos.

Dr. Mackey, V.P., said he had used cocaine in a case of exophthalmos for the relief of pain, for which it was very effectual, and although it had been used some time no mischief had been noticed, and he asked Mr. Jessup whether, as an ophthalmic surgeon, he would advise its discontinuance? The case was not extreme.

Mr. Jessup had only used it in severe cases, but his experience showed it increased the disease, so that he could not advise it to be continued.

Dr. Stephen Mackenzie read a paper

ON CANNABIS INDICA IN CERTAIN HEADACHES.

He lauded the drug, but said it must be continued for months in full doses, with alteratives and aperients. It was in continuous, dull, heavy headaches he recommended it.

Dr. Mackey said that the late Dr. Seguin, of New York, had strongly recommended this drug, but chiefly in intermittent headaches. Dr. Mackey had followed this practice with success, and often in children, and he found Brighton children suffered much from these intermittent headaches. It was only in giving it in continuous cases that this paper differed from Dr. Seguin's practice, and curiously, the author of it used the cannabis in the same doses and the same combinations as Dr. Seguin.

No other member wishing to speak, Dr. Mackenzie replied that he was acquainted with Seguin's views, and the drug was recommended in all text-books, but not in these peculiar continuous cases. The time having now expired the Section adjourned.

Dr. W. H. Stone exhibited in this Section the apparatus which he had used at his recent Lumleian lectures, and during the day, in an adjoining room, he gave demonstrations from time to time to interested knots of listeners.

(To be continued.)

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

Tenth Annual Session, held at Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

Wednesday, August 25th—First Day—Morning Session.

The President, Dr. Edward Wigglesworth, of Boston, called the Society to order at ten o'clock. The first business was the reading of the President's address.

Gentlemen: Ten years ago, at Philadelphia, I had the honor of calling to order the first public meeting for the organization of this Association. Our specialty for the first time received national acknowledgment. Our guerilla warfare was over, and our subsequent record has been one of unbroken successive victories over bigotry, error, and ignorance.

But the day of paladins is past, and our ranks will admit more recruits. There are still remaining opportunities for more extended instruction of students in medical schools, while the lack of hospital facilities for the proper clinical treatment of diseases of the skin is a standing shame and disgrace to our municipal authorities, our hospital boards, and to the medical profession itself. Some progress has, however, been made. New York has now a special hospital for skin diseases, besides two wards in the Charity Hospital, and Philadelphia has special clinics with beds at three different institutions.

About twice as many cases of diseases of the skin are now annually treated by specialists as there were ten years ago.

The contributions to American dermatological literature during the past decade include the best treatises, hand-books, and atlases, the only periodicals, and some of the best monographs of the time in the English language.

Our sole local organization, the New York Dermatological Society, is as active as ever, and the good work which it has already done is constantly increasing.

Other objects of the foundation of our Association have been by no means neglected during the past ten years. There exists to-day a harmony and good feeling among us which, but for the personal acquaintanceship resulting from the formation of this Association, never would have existed. We have come into better accord as to the "Nature and Treatment of Skin Diseases." Our increased membership proves that our Association is "held as a place of aspiration," and it has consistently required "independent work in our department" as the essential preliminary step toward the acquisition of such membership. The systematic work of our Standing Committee upon Statistics has already furnished valuable data for comparison, as well as a series of excellent reports upon "Leprosy in America." Concerted official effort has done much, and will do more, to repress the rank luxuriance of growth of dermatological nomenclature, and to furnish a "uniform and simple system."

While much has been accomplished, much still remains to be done. The idea of specialism, already rooted, is to be nurtured and trained in the minds of the profession and of the public, and the practical development, socially, of our specialty itself, is to be elaborated in many minor details. The pioneer must no longer prove a martyr. A knowledge of the weaker side of human nature, useful for selfish, financial ends, must no longer be allowed to usurp the province of exact scientific acquaintance with disease, inuring to the benefit of our race. The "elaborate division of labor" is "as useful and successful in a learned profession as it is in the mechanic arts," for it is merely a relative question of height of standard. Specialism substitutes quality for quantity, which substitution is the essential characteristic of the civilized man as distinguished from the savage; while the rapidity of such substitution gauges the progress of civilization itself. Medicine is merely that complex whole which results from the combination of all its component parts, and their individual advancement is the criterion of its own progress.

Science is only exact knowledge. Medicine is that knowledge specially directed to the physical welfare of mankind, and specialism is only that further subdivision rendered necessary by the very various parts composing the individual, and possible by the extension of our opportunities for studying these parts due to increase of mechanical means for enlargement of the fields of our hitherto unaided senses. No one can to-day "take all knowledge to be his province." Science does not culminate in a Jack-of-all-trades, least of all in one whose conscience has become anæsthetized by custom, who confounds his own limitations with the "limitations of human understanding," and his own ignorance with "the immaturity of medical therapeutics." The specialist builds his own boundary wall, and cannot, if he would, poach upon the preserves of others. He "distinguishes what he can do from what he cannot," thus filling the old definition of the best physician. He cannot maltreat a patient, and when compelled to confess ignorance and seek superior wisdom, charge the wronged sufferer another and still higher fee for a "consultation," which is, in reality, a confession. It has been sarcastically said that "the sole duty nowadays of the family doctor is to decide what specialist shall be summoned." It certainly is his duty, and a very important one as a man of honor, to decide whether anyone, and if so, who, can probably accomplish that wherein he admits that he himself has failed. Unfortunately, many know so little that they are even ignorant of how much is known by others; but in many respects the specialist has already raised the average standard of requirement for general practice to such an extent that much of the old routine practice of physicians, who treated their patients for the very diseases for which they referred members of their own families to the specialist, has now become punishable malpraxis. But the general practitioner has his revenge in opposing as unnecessary the hospital appointment, and even the

private practice, of the very specialist to whom he himself flees as "a very present help in time of trouble."

We are told that "the human body is made up of parts and functions so thoroughly interdependent that it cannot be parcelled out into defined and isolated regions." It can, and it cannot. What scientist divides a country into square miles and attempts to become thoroughly conversant with every atom existing in each of those miles? The special divisions of study are rather the flora, the fauna, the geological strata, etc., though all these may pervade identically every mile of the region. If regional surgery is possible, then specialties are certainly not contra-indicated. We hear of "appalling pathological conglomerates," due to lack of proper "general medical treatment." Not only "conglomerates," but often single lesions, are very variously diagnosticated by different general physicians, and the "conglomerates" are usually merely the aggregated effects of original causes which might have been obviated by proper investigation in due season on the part of suitable specialists.

The aforetime "consulting physician" meant one who in addition to his general acquirements knew more about some particular thing than anyone else. We may be sure that his general acquirements had to pay the penalty. To-day we honestly admit this, and, renouncing the practice obtainable by general acquirements, keep to that particular thing of which we know more than others. No one has mental ability enough at the present time to add to the greatly extended knowledge necessary to the general physician the intensified fundamental acquaintance with detail needed by the specialist. Life is too short for the ablest intelligence to exhaust even any one specialty. The physician may, like Newton, "think the thoughts of God after him," but the thoughts of the infinite upon the smallest molecule of matter call for more than the limits of a finite existence. The true consulting physician of to-day is the specialist, and he should therefore receive this title at the hospitals with which he is connected, while those ex-physicians, called consulting, but never consulted, should receive their true and proper title of Emeriti.

But enough of the "idea of specialism." The public will in time appreciate the absurdity of being content with inferior results in one branch of medicine, because, forsooth, there are so many others in which their medical adviser is equally or more at home. It will reason rather that he who "insists upon doing the work of ten men manifests a quality of mind which we can only call arrogance, and which challenges for his work severe criticism." Versatility will not atone for crude and imperfect work any more than will lack of time, hurry of life, keenness of competition, or financial necessity, and it is merely brazen self-assertion which delights "not so much in doing the thing well as in showing how well he can do it."

Believing in the ultimate achievement of all possibilities, and in the progress of truth, I have no doubt as to the future of specialism if we are honest and earnest. Not infinite omniscience, but infinite morality, is the duty of the specialist, and this conscientiously carried out will blunt the sharpest dart of the hostile general practitioner. While visions of what yet remains to be accomplished might well lead us almost to despair, a mere glance at the generally prevailing ignorance on the part of both physicians and their patients shows conclusively that we and our work are imperatively demanded.

Dr. J. C. White, of Boston, held that more exact data must be obtained before we can regard these affections as a necessary sequel of syphilis, and as anything more than accidental occurrences. While there is nothing *à priori* against a casual relation existing between these conditions and syphilis, such relation has not been proved. The early roseolous exanthematous condition of the skin in syphilis is of sufficiently frequent occurrence to be looked upon as a distinct feature of syphilis. This is wholly unlike the rare forms of dermatitis which have been described to-day.

Dr. G. H. Tilden, of Boston, thought that in the present state of our knowledge it would be more philosophical to consider the appearances described as accidental rather than as dependent upon the specific disease.

RUBELLA, OR ROTHELN,

by Dr. I. E. Atkinson, of Baltimore, consisted of a thorough *résumé* of the literature of the subject, and gave an extended account of its symptoms, diagnosis, etc. The disease was regarded as distinct from measles and scarlet fever. Swelling of the lymphatic glands is a peculiar and marked symptom. This swelling is painful, but does not pass on to suppuration. In many cases fever is absent. The eruption first appears on the forehead and face, and in the course of a few hours spreads to other parts of the body. Complications and sequelæ are not unknown, the most common being bronchitis, pneumonia, and gastro-intestinal disorders.

The Speaker suggested that rubella be accepted as the proper title of this disease, and that it might be known in popular language as epidemic roseola.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE TREATMENT OF PHTHISIS BY RECTAL MEDICATION—INFECTIOUS CHARACTER OF ERYSIPELAS—RESULTS OF OSTEOTOMY FOR CLUB-FOOT—JUGULATION OF TYPHOID FEVER—VACCINATION AND REVACCINATION—M. CHEVREUL.

Paris, August 13, 1886.

At a recent meeting of the Academy of Sciences Dr. Bergeon brought to notice the advantages of a therapeutical method based on this principle, established by Claude Bernard, to wit, that the introduction through the rectum of substances, even when toxic, does not present any danger so long as pulmonary elimination is not interfered with. The author employed this method in several maladies, and particularly in pulmonary phthisis, and, after a certain number of trials, he gives the preference to sulphurous mineral waters. A current of from 4 to 5 litres of carbonic acid gas passing through from 250 to 500 grammes of sulphurous mineral water is introduced into the rectum twice in the twenty-four hours. A few days after the employment of this procedure Dr. Bergeon noticed: 1. A diminution, approaching almost to total suppression, of the cough. 2. A profound modification in quality as well as in quantity of the expectoration. 3. Suppression of the sweats. 4. Improvement of the general state, and that not only in phthisis at its commencement, but in its confirmed state. Auscultation, daily practised, permitted the doctor to verify the progressive disappearance of the moist râles.

In his inaugural thesis for the doctorate, Dr. Blaise chose for his subject "De l'Érésipèle Infectieux." According to the author, all the symptoms presented by erysipelas tend to demonstrate its infectious character. To the contagion, fever, shivering, the eruption, the visceral lesions, must be added, as proof of this infection, the hemorrhages. The hemorrhages which are met with in erysipelas are of diverse natures—hemorrhages from the mucous membranes, subcutaneous hemorrhages, deep sanguineous collections. The subcutaneous hemorrhages may show themselves under the form of ecchymoses, petechiæ, or under the form of purpura. The latter may

remain localized, or it may become generalized. It is transitory, appears at places where the erysipelatous eruption had just left, and may reappear at different times. It appears to come on after the eruption or during convalescence. The hemorrhages from the mucous membranes consist of frequent epistaxes, which are sometimes so profuse as to place the life of the patient in danger.

At a recent meeting of the Surgical Society of Paris, Professor Verneuil read a paper on "The Results of Osteotomy for Club-foot." His mode of operation consisted in taking away in succession the astragalus, the cuboid, the scaphoid, and the anterior half of the os calcis, until he is able to bring the foot in a line with the leg. He does not, however, attempt to fix the foot in position until the wound is in a fair way of being healed, and upon this he lays stress. Dr. Lucas Championnière, on the contrary, tries to obtain primary union of the wound, so that apparatus to correct the deformity may be applied as speedily as possible; while Professor Verneuil thinks that suppuration is useful in that it gives rise to a large mass of new-granulation tissue.

Professor Pécholier, of the Faculty of Montpellier, made a communication at the meeting of the Paris Academy of Medicine, last week, on the abortive treatment, or what he terms the "jugulation," of typhoid fever, which consists of administering the sulphate of quinine in doses of from one gramme to one gramme twenty centigrammes per day from the earliest recognition of the symptoms. During the first few days of the attack, or when there is much disturbance of the heart's action, he administers twenty centigrammes of digitalis, in combination with the sulphate of quinine, per day. When the body temperature is unusually high, foot-baths are added to the treatment, especially when any congestive phenomena are observed in the head or other viscera. By this treatment the disease, according to M. Pécholier, is "jugulated" in from thirteen to fifteen days; in support of which the doctor cites sixty-four consecutive cases which came under his own observation, and among which not a single death occurred.

According to a report furnished at the same meeting by Dr. Blot, director of gratuitous vaccination at the Academy of Medicine, where human lymph alone is employed, there have been, during the last six years, 19,000 vaccinations, and 5,336 revaccinations performed; 70,000 squares of glass, 16,000 tubes containing vaccine lymph, and 29,000 lancets tipped with the same, have been sent out in that time. Thus there are from 3,000 to 4,000 vaccinations and 1,000 revaccinations per year. As regards results, the successes by arm to arm vaccination amount to ninety-nine per cent., with the lymph in tubes from eighty-five to ninety per cent. This report was furnished at the requisition of the Minister of Public Instruction, in forwarding which the Academy expressed a wish that centres for vaccination should be organized all over France, so as to be within the reach of all. They should be placed particularly in the large seaport towns.

On the 31st of this month, the venerable M. Chevreul attains his 100th year, on which occasion a grand popular fête is to be organized in his honor. The greater number of his colleagues of the Institute have promised to take part in the celebration, which is fixed for September 1st. The fête is to take place at the Museum of Natural History, which has been chosen for several reasons. In the first place it was done to spare him as much fatigue as possible, being near to his own residence; and it has also been considered that the illustrious academician has spent nearly all his life at the Museum, where he entered in 1810, as chemical assistant, since which time he has never left it. In 1830, he succeeded his master, Vauquelin. Forty years later, being director of the Museum during the siege and bombardment of Paris, he managed to save from complete ruin the magnificent collection confided to his care.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 22 to August 28, 1886.

WOODHULL, A. A., Major and Surgeon. Granted leave of absence for fourteen days, to take effect on or about September 1, 1886. S. O. 197, A. G. O., August 25, 1886.

TAYLOR, M. K., Major and Surgeon. Leave extended one month. S. O. 195, A. G. O., August 23, 1886.

LAUDERDALE, J. V., Captain and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for one month's extension when his services can be spared. S. O. 195, A. G. O., August 23, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. On expiration of his present leave of absence relieved from duty in the Department of the East, and assigned to duty in the Department of Texas. S. O. 195, A. G. O., August 23, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 28, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	27	6
Scarlet fever	14	5
Cerebro-spinal meningitis	6	6
Measles	27	11
Diphtheria	42	22
Small-pox	0	0

UNIVERSITY OF LONDON EXAMINATIONS.—The pressure brought upon the University of London to induce that institution to hold its examinations more frequently has been partially successful. It is now announced that not only the Preliminary Scientific, but also the Intermediate Examination for the M.B. degree will be held twice a year. Candidates in future will also have to choose between the pass and the honors examinations at the latter as well as at the former examination. This is a unique departure in medical examinations. It means that candidates who wish for honors will, in future, have to go direct for the honors examination—in their honors subject or subjects—while taking the pass papers in the rest of the examination. At present a candidate can go in for a "pass," and then please himself afterward about going in for honors.

THE LATE DR. MOXON.—Our London correspondent sends us the following interesting account of Dr. Moxon: "In the person of Dr. Moxon London loses one of its ablest, most original, and highly esteemed physicians. Dr. Moxon was found dead in his chair at an early hour of the morning. He was only fifty. At the time of his death he was one of the full physicians to Guy's Hospital, having previously served the subordinate offices with credit and distinction. Dr. Moxon received his medical education at Guy's Hospital, and graduated with honors at the University of London. Both at Guy's and at St. Bartholomew's it is well understood that only on their own alumni will hospital appointments be conferred. At the latter hospital I believe the rule is absolute. At Guy's it has at any rate been very consistently acted upon, and to such an extent that it is not usual for outsiders to apply. The last vacant

assistant physiciancy was, it is true, thrown open, but it was nevertheless bestowed on a Guy's man. Dr. Moxon was more fortunate than many of his contemporaries in getting his appointment at a comparatively early age. At the older hospitals—notably at Bartholomew's—the tendency has been to hedge them about so strictly that a man may be nearly forty before he becomes assistant physician. Dr. Moxon excelled both as a writer, a teacher, and a practical physician. He was an early worker in the field of visceral syphilis, and wrote a paper on the subject in 'Guy's Hospital Reports' nearly twenty years ago. He will perhaps be best remembered by his published 'Lectures on Pathological Anatomy,' of which he was author jointly with Dr. Wilks. This work at once obtained an acknowledged position. With no pretence of being exhaustive, and no attempt to give all the minutiæ of pathological histology, it still remains unrivalled as a faithful exponent of naked-eye morbid anatomy, and that, too, in a style not devoid of literary grace. In literature and controversy Dr. Moxon was what may be called a free lance. He apparently delighted in the unconventional, and would say what he thought, whether popular or otherwise. He once gave a clinical lecture in which he expressed the wish that he could compel all his pupils to study heart diseases in the wards for three months without using a stethoscope, but simply paying attention to the general symptoms. His lively but good-humored criticism of Dr. Bristowe's definition of fever as 'that abstract condition which is common to all so-called "febrile disorders," and the presence of which gives them their claim to that designation,' is still fresh in our memories, and the pungency of Dr. Moxon's satire was not much detracted from when it was pointed out that he had only quoted one sentence in Dr. Bristowe's definition. Dr. Moxon took a great interest in the question of degrees for London students, but was anxious for the present university in London to retain its position. He was, however, wishful to see its influence extended, and the publication of a colonial pass-list of one of its examinations drew from him a sarcastic taunt as to the university concerning itself with primary education in the Mauritius. While, however, he will still live to the many through his published writings, he will be still more vividly remembered by those who had the pleasure and privilege of his personal acquaintance. As a clinical teacher, nothing was more remarkable than the way in which he always found something fresh to say about his cases. If he saw the same case several times a week for weeks, he would make it teach something on every successive visit. He was so unconventional, also, that it sometimes seemed as if his fluency in speech was running away with him and making him say what he did not mean, but even when on the verge of the absurd he would make what he was saying teach something and show that, however apparently purposeless his speech had been, he had not for a moment lost sight of the point before him."

AGNEW'S SURGERY is now being translated into Japanese by Dr. Toynbe. It is to be published in seven volumes, at a cost to subscribers of seven yen, about six dollars.

POLLUTION OF THAMES WATER.—Coincidently with the advent of real summer weather and the annual increase in diarrhœa cases comes the usual scare about the condition of the Thames. A new danger exists, we are told, in the regattas held on the Upper Thames. These attract a large concourse of yachts and house-boats, the sewage and refuse from which is mostly thrown overboard and comes down to pollute the intake of the water companies. How many germs may thus be introduced into the water we drink it is impossible to say. Meanwhile it is but a very poor consolation to be told by Messrs. Crookes, Tidy, and Odling that bacilli will not live long in pure water, as that of our metropolitan river is very far indeed from being pure.

NINTH INTERNATIONAL MEDICAL CONGRESS.—The Ninth International Medical Congress will assemble in the city of Washington, the capital of the United States, on Monday, September 5, 1887, at twelve o'clock noon, in accordance with the arrangements made at Copenhagen in August, 1884.

Patrons.—The President of the United States, the Hon. Grover Cleveland; the Secretary of State, the Hon. Thomas F. Bayard; the President of the Senate of the United States, the Hon. John Sherman; the Speaker of the House of Representatives of the United States, the Hon. John G. Carlisle.

Proposed Officers of the Congress.—President: Nathan S. Davis, M.D., LL.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine, Chicago Medical College, and of Mercy Hospital, Chicago, Ill.

Vice-Presidents (as far as appointed): McCall Anderson, M.D., London, England; Mr. Thomas Annandale, Professor of Clinical Surgery, Edinburgh University, Edinburgh, Scotland; Professor Dujardin-Beaumetz, M.D., Paris, France; Cuthbert Hilton Golding Bird, M.D., Professor of Physiology, Guy's Hospital, London, England; Professor Carl Braun, M.D., Vienna, Austria; William Brodie, M.D., Emeritus Professor of Principles and Practice of Medicine and Clinical Medicine, Detroit College of Medicine, Detroit, Mich.; W. W. Dawson, M.D., Professor of Surgery and Clinical Surgery, Medical College of Ohio, Cincinnati, O.; Thomas M. Dolan, M.D., Halifax, England; F. R. Frazer, M.D., Professor of Materia Medica and Therapeutics, University of Edinburgh, Edinburgh, Scotland; J. A. Grant, M.D., Ottawa, Canada; J. A. S. Grant, M.D., Cairo, Egypt; A. L. S. Gusseraw, M.D., Professor of Obstetrics, Berlin, Prussia; Dr. Hans. Ritter von Hebra, Vienna, Austria; Dr. E. Klein, London, England; Mons. le Baron H. Larrey, Paris, France; Sir William MacCormac, Surgeon St. Thomas' Hospital, London, England; Mr. George B. Macleod, Professor of Surgery, Glasgow, Scotland; John S. McGrew, M.D., Honolulu, Hawaiian Islands; E. M. Moore, M.D., LL.D., Rochester, N. Y.; Professor Von Monseil, Bonn, Prussia; Dr. Muller, Berlin, Prussia; William Murrell, M.D., London, England; Charles D. F. Phillips, M.D., M.R.C.S., late Lecturer on Materia Medica and Therapeutics, Westminster Hospital, London, England; Mr. Richard Quain, Professor of Anatomy, London, England; Tobias G. Richardson, M.D., Professor of General and Clinical Surgery, Medical Department, Tulane University, New Orleans, La.; Mons. P. Ricord, Paris, France; Professor John Burdon Sanderson, M.D., London, England; Lewis A. Sayre, M.D., Professor of Orthopædic and Clinical Surgery, Bellevue Hospital Medical College, New York; Dr. Mariano Semmola, Professor of Experimental Therapeutics, University of Naples, Italy; Dr. Leopold Servais, Antwerp, Belgium; J. M. Toner, M.D., Washington, D. C.; Dr. P. G. Unna, Hamburg, Germany; Professor F. Winckel, Dresden, Saxony; the President of the American Medical Association; the Surgeon-General of the United States Army; the Surgeon-General of the United States Navy.

Secretary-General: John B. Hamilton, M.D., Supervising Surgeon-General of the United States Marine Hospital Service; Professor of Surgery, Georgetown University, D. C.; Professor of Surgery, Chicago Polyclinic.

Treasurer: E. S. F. Arnold, M.D., M.R.C.S., Newport, R. I.

Chairman of the Finance Committee: Richard J. Dunglison, M.D., Philadelphia, Pa.

Chairman of the Executive Committee: Henry H. Smith, M.D., LL.D., Emeritus Professor of Surgery in the University of Pennsylvania, Philadelphia, Pa.

Chairman of the Committee of Arrangements: A. Y. P. Garnett, M.D., Emeritus Professor of Clinical Medicine, Columbia University, Washington, D.C.

The congress will consist of such members of the reg-

ular medical profession as shall have registered and taken out their ticket of admission, and of such other scientific men as the Executive Committee of the congress shall deem it desirable to admit. The books for the registration of members will be open from 9 A.M. to 5 P.M., on Thursday, September 1, 1887, and on each subsequent day during the session, under the charge of the "Reception Committee." Any member desiring to anticipate this registration can apply by letter to the Secretary-General and forward his dues, with his address in full, when a receipt will be returned. The dues of membership for residents of the United States will be ten dollars ($10.00). There will be no dues for members residing in other countries. Each member will be entitled to receive a copy of the "transactions" of the congress, when published by Executive Committee. The general sessions of the congress will be devoted to the transaction of business, and addresses and communications of general scientific interest by members appointed by Executive Committee. A printed "programme" of the sessions will be presented to each member on registering. A printed "order of business" for each day will also be issued. The work of the various sections will be directed by the president of the section, and the order will be published in a daily programme for each section. Questions and topics that have been agreed on for discussion in the sections shall be introduced by members previously designated by the titular officers of each section. Members who shall have been appointed to open discussions shall present to the secretaries of the section, in advance, statements of the conclusions which they have formed as a basis for the debate. Brief abstracts of papers to be read in the sections shall be forwarded to the secretaries of the proper sections, on or before April 30, 1887. These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the congress. Papers related to topics not included in the list of subjects proposed by the officers of the sections may be accepted after April 30, 1887, and any member wishing to introduce a topic not on the regular lists of subjects for discussion shall give notice of the same to the Secretary-General, at least twenty-one days before the opening of the congress. The titular officers of each section shall decide as to the acceptance of such proposed communications, and the time for their presentation. No communication shall be received which has been already published or read before a society. The official languages of the congress shall be English, French, and German. Each paper or address shall be printed in the "transactions" in the language in which each is to be delivered. All discussions shall be printed in English. The officers of the congress and the officers of the sections, including all foreign officers, will be nominated to the congress by the Executive Committee, at the opening of the first session. A partial list of the officers to be nominated (except the members of council of the different sections, the list of whom is at present imperfect) is offered herewith. The Executive Committee cordially invites members of the regular medical profession, and men eminent in the sciences collateral to medicine, in all countries, to participate, in person or by papers, in the work of this great humanitarian assembly. Communications relating to appointments for papers to be read in the congress should be addressed to Dr. John B. Hamilton, Secretary-General of the Ninth International Medical Congress, Washington, D. C. All questions or communications connected with the business of the Executive Committee should be addressed to Dr. Henry H. Smith, Chairman of the Executive Committee of the Ninth International Medical Congress, Philadelphia, Pa. Gentlemen named in any position in the congress are requested to notify the Chairman of the Executive Committee, as soon as practicable, of any error in the name, title, or address in this circular. Ladies in attendance with members of the congress, and those invited by the "Reception Committee," may attend the general sessions of the congress when introduced by a member. They will also be invited to attend the social receptions. The Executive Committee reserves the right to invite distinguished persons to any or all the meetings of the congress. The attendance of medical students and others interested in the work of the various sections, or in the general addresses delivered in the congress, will be permitted, on the recommendation of the Secretary-General or the officers of a section, on their taking out from the Registration Committee a general ticket of admission, fee one dollar ($1.00); but such persons cannot take part in the proceedings. All communications and questions relating to the special business of any section must be addressed to the President or one of the Secretaries of that section. As many details of the congress and numerous appointments of officers are yet to be completed, other circulars will be issued from time to time, as circumstances may demand. The following is the list, as at present completed:

Executive Committee of the Congress.—Drs. Henry H. Smith, Chairman; N. S. Davis, John B. Hamilton, E. S. F. Arnold, Richard J. Dunglison, Secretary; Abram B. Arnold, William T. Briggs, DeLaskie Miller, James F. Harrison, F. H. Terrill, William H. Pancoast, John H. Callender, Alonzo B. Palmer, J. Lewis Smith, E. Williams, S. J. Jones, William H. Daly, A. R. Robinson, Joseph Jones, Albert L. Gihon, John P. Gray, Jonathan Taft, Frederick S. Dennis, A. Y. P. Garnett.

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By Order of the Executive Committee of the Congress. DR. HENRY H. SMITH, Chairman.
DR. RICHARD J. DUNGLISON, Secretary.

THE DEATHS IN INDIA FROM SNAKES AND WILD BEASTS were, in 1885, from snake-bites, 1,066; from wild beasts, 110.

A DEFENCE OF AMERICAN MEDICAL SCHOOLS.—Dr. H. W. Jones, M.A., an American resident of England, writes to *The Lancet:* "It is by no means uninteresting to a medical man 'abroad' to observe his own country and its institutions through the eyes of foreign authorities. And while we must confess to much that was questionable in the past, it appears at present that the case of medical education in the United States is hardly put with fulness—if, indeed, with fairness. As the effete doctrines of the early Church yet serve as the sceptic's best weapons, so now do the allegations which I here rehearsed rise against the 'American system.' We are charged with 'inadequate preparation,' opening the schools to crude and undisciplined minds; with a 'too short and narrow curriculum,' giving insufficient and unbalanced foundation for so serious and important a superstructure; with 'poverty of clinical advantages,' committing students to an unpractical, and, therefore, untrue, view of their future duties; with 'the full degree conferred by any of the too numerous colleges after such a course.' Truly a sad catalogue of errors, if applicable now and generally to the institutions of any country. But a knowledge of all the circumstances will insure material alteration in the scope of these charges, and a much closer approximation to the truth. Though I write without statistics at hand, and only from a general acquaintance with the facts acquired by long professional observation, I venture to state that more than half the American graduates have for many years gone out from the three great medical centres, New York, Philadelphia, and Boston, whither have gravitated for the same period the greater lights of the profession as practitioners, teachers, etc. These men, many of them of humble birth, self-taught, having elevated themselves to a great and noble success, do not forget their own origins, and are slow to place impediments in the way of those who have the same aspirations, the same difficult ascent to make. Hence the moderate requirements of the preliminary examination, to be followed in these schools by instruction not easily surpassed in breadth and accuracy, I am bold to say, whether it be didactic or clinical. Here hospitals are numerous and abounding in every variety of material. At Yale and the Cincinnati, Chicago, Michigan, St. Louis, and New Orleans schools the same is true, excepting the restrictions arising from moderate hospital accommodation, which will always vary with population. Here at least a third of the whole number of annual graduates receive their diplomas, and in most of these schools the final or 'pass' examination covers the entire field of study, determining the solid acquirements of the student, rather than what he may have "crammed" during the weeks previous. In some cases the 'State Medical Society' exercises a wholesome

supervision, its delegates taking active part in the oral tests applied to scholarship. Post-graduate courses are often open to the more ambitious student, and to such practitioners of long standing as may desire henceforth to restrict their work to special lines. To 'graduate into a specialty' is not with us *en règle*. It is the 'mushroom school' which gives rise to offences as rank in the nostrils of American as in those of foreign physicians. These spring up in the growing towns of the vast West, partly the offspring of local ambitions and rivalries, partly from a local demand for a not too costly medical instruction, made by the pupils and assistants of neighboring practitioners, or by youths who labor two-thirds of the year to earn the means of defraying the cost of a winter's tutelage in medicine. Few of these ever graduate, and if they do, few fail to seek their diplomas at a more legitimate fountain-head. The schools themselves meet with early graves, though their example and warning are not long heeded. It is true that all who graduate from these State-chartered schools receive the degree of M.D., and are styled 'doctors,' but in no country in the world does a man so soon find his proper level, whatever his profession or diplomas. It is the absence of social caste, the subordination of influence to real merit, the general indifference to titles, the knowledge that, after all, success must be fought for, which make the American physician so oblivious of the initialed distinctions that obtain in England and elsewhere. After all is said, in these days, when science is of common birth and acknowledges no single foster-mother, we may safely claim to be known by our fruits, and one may proudly point to the just and able criticisms of your own columns upon works of American origin for highest testimony to the value and volume of American professional attainment and culture."

The Treatment of Basedow's Disease.—Dr. W. Hale White (*British Medical Journal*) has followed up the history of twelve cases of exophthalmic goitre, and makes the following comment on the effects of treatment: Of the twelve, eleven died; but only two of these from the disease itself; the average duration was three and two-thirds years. With regard to the treatment, Jane A——, who did best of all the cases, had no treatment; Alice M—— benefited considerably from the local application of iced water; Ellen E—— was treated with the continuous current, with a good result; Ellen H—— did well on iron, digitalis, and belladonna; and Sophie S——'s account of her treatment, after leaving the hospital, is hardly trustworthy. It is noteworthy that the case which died of consumption was, as regards her Graves' disease, much improved by the application of the continuous current. Iron and digitalis are comparatively useless, and there is not sufficient evidence to show the value of belladonna; but two of the successful cases took it while under treatment by other means, so, perhaps, it had some share in their recovery. The lesson to be learned from these figures is that the prognosis of Graves' disease is bad, for the patients are partly liable to death from sudden syncope, and also seem more likely to die from other causes apparently unconnected with exophthalmic goitre; and, of those who do not die, many do not completely lose the disease. The best treatment would appear to be the continuous galvanic current and iced water. It was for this prognosis that I collected the cases; but they may be also utilized to show a few other points.

Pensioners, and the Mortality from Amputations.—A statement prepared at the Pension Office, by direction of the Chief of the Certificate Division, Mr. J. E. Smith, shows that there are only 453 pensioners of this class on the roll who have lost an arm at the shoulder-joint or a leg at the hip-joint. The small number as compared with the number of pensioners in the other classes indicate how few survive the amputation of an entire limb. There is greater danger attendant upon the entire amputation of a leg than of an arm, for there are on the rolls only 10 pensioners who have lost a leg at the hip-joint, while those who have lost an arm at the shoulder-joint number 443. They receive $45 per month. There are 3,105 pensioners who have lost an arm above the elbow, and 2,641 who have lost a leg above the knee. Such pensioners are to receive a pension of $36 per month, an increase of $6. There are also 839 pensioners who have lost an arm below the elbow, and 1,185 pensioners who have lost a leg below the knee. These pensioners are to receive $30 per month, an increase of $6. The bill further provides "that nothing contained in this act shall be construed to repeal Section 4699 of the Revised Statutes of the United States, or to change the rate of $18 per month therein mentioned to be proportionately divided for any degree of disability established for which Section 4695 makes no provision." The list of pensions now paid shows that in the higher grades the number of pensioners is comparatively small. For instance, what is termed total disability, such as the loss of both arms, both legs, both hands, both feet, the sight of both eyes, and insanity, the highest pension is paid, namely, $72 per month. The number of pensioners in these classes is as follows: Lost both arms, 21; both legs, 22; both hands, 7; both feet, 32; both eyes, 551; insanity, 190. There are only two persons who receive a higher pension than $72 per month, one of whom receives $75 per month and the other $100, the latter being General Black, Commissioner of Pensions, who received this pension by a special act of Congress. Of the 250,000 and more pensioners now on the rolls, the largest number, 60,268, receive $4 per month; the next highest number, 44,775, receive $8 per month.

The Homœopathic Treatment of Profanity.—"Another mental condition characterizing anacardium is a propensity to swear. Now, do not suppose that I recommend anacardium for the cure of profanity when it exists as a result of low morals; far from it. When, however, the propensity to swear comes as a result of mental disease, anacardium may do noble work. I once treated a minister who exhibited a remarkable *penchant* for profanity. Try as hard as he would, he could not help it. Anacardium made a complete cure in his case. Another remedy producing a disposition to swear is *nitric acid*; but I have never seen it do any good in these cases, excepting after the abuse of mercury."—*Hahnemann Monthly.*

A Dangerous Book.—The circulation of Dr. Ireland's book, "The Blot upon the Brain," has been prohibited in Russia. This is no doubt owing to the chapter on the hereditary insanity of the Romanoffs, and the historical illustrations about the harm insane monarchs have caused to their subjects.

Tracheotomy and Intubation.—Dr. F. E. Waxham, of Chicago, says that among 306 cases of tracheotomy performed in Chicago there were 58 recoveries, or 18.95 per cent.; while among 83 cases of tracheotomy there were 23 recoveries, or 27.71 per cent.

Teneriffe as a Health Resort.—It is proposed to establish near Orotava, in the island of Teneriffe, a great health resort on the plan of similar places in Switzerland, combining the advantages of a sanitarium for invalids with opportunities of healthy and instructive enjoyment for those who wish change. Humboldt pronounced the valley leading down to the sea the lovliest spot he had ever seen on earth, blessed with an eternal spring. About three miles higher up, at the old town, the air is bracing. The position lies embosomed in an amphitheatre of mountains, dominated by the famous peak.

The Virginia Medical Society holds its next annual meeting at Fredericksburg, beginning October 26th.

Remedy against Coryza.—Hydrochlorate of cocaine, grs. ij.; roasted coffee and white sugar, 3 j. each. To be taken as snuff.

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THE EVOLUTION OF THE APOTHECARY.

By W. A. PURRINGTON, Esq.,

NEW YORK.

THE expression by Mr. Fox in an after-dinner speech, when on his special mission to St. Petersburg, of a patriotic belief that the "American language" was destined to become the universal speech, excited comment and curiosity. Matter-of-fact Britons resented this appropriation of their mother-tongue as an application of cuckoo methods to linguistics. Polyglot Russians yearned to acquire a new dialect.

Apothecary is one of those words in the use of which American differs from English and resembles Scotch; for with us, as in Scotland, prior to the passage of the pharmaceutical acts, if not now—it denotes one whose business, of a trading nature, consists strictly in selling, compounding, and dispensing drugs, chemicals, and kindred wares. The introduction into the stock-in-trade of soda-water, cigars, and confectionery, shows a tendency of the business to revert, even in great cities, to its type; for grocers and poticaries were formerly a single brotherhood, and were first incorporated into one worshipful society. Every grocer had an *ἀποθήκη*, by virtue of which he was a poticary.

In the fourth year of his pedantic and witch-hating reign, James I. granted a charter to "The Wardours and Fellowship of the Mystery of Grocers of the City of London," making of them a body corporate. But, as often happens where a child of his works secures a recognized social status for his family, the lesser, or junior, portion of this Mystery soon felt itself finer and more mysterious than the entire fellowship. Moreover, the blending of trades had its own inconveniences, easily conceivable to one who has been in rural districts where it still obtains. Our own Galen, who is heroic, once prescribed a very drastic remedy, and a combined haberdasher-grocer-apothecary of Westchester essayed to supply it. But the unusual dose, which "no one out here has ever took," drove him to a dispensatory, where for fifteen minutes he groped befogged, searching if a city man had anything in common with the ostrich. Only fear of not selling the drug decided him to risk decreasing the population.[1]

Perhaps (episodes of this kind as well as) a realization of the need of special care and training for the safe dispensing of medicines induced the "well-beloved Theodore de Mayerne and Henry Atkins," his "discreet and faithful physicians," to make those representations to James that induced him, in the thirteenth year of his reign, to separate the apothecaries from the grocers after nine years of union, and grant the former a separate charter under the corporate name of "The Master, Wardens, and Society of the Art and Mystery of Apothecaries of the City of London."

But although it was through the intercession of physicians that the apothecary, thus freed from the environment of grocerdom, was able to set up his own mystery, we may be very sure that the said Theodore and Henry never intended his evolution to go on until he should become, as he now is in England, a general practitioner of medicine. On the contrary, the new charter provided that the rights of the College of Physicians should not be abridged, that the college should exercise a certain supervision over the company, and that the apothecaries should consult the physicians on the use and properties of medicine.[1] The exclusive privilege granted to the apothecaries by their charter was this: "No person, free of the Grocers', or any other mystery in London, except those of the Apothecaries' Company, shall keep any apothecary's shop, or make, compound, administer, sell, send out, advertise, or offer for sale any medicines, distilled waters, compounded chemical oils, decoctions, syrups, conserves, eclegmas, electuaries, medical condiments, pills, powders, lozenges, oils, unguents, or plasters; or otherwise in any way practise the faculty of an apothecary," etc., under a penalty of £5. The only limitations upon this power were the said provision preserving the rights of the College of Physicians, whose licentiates might, under the statute, dispense medicine in their own practice, and the further provision that "approved chirurgeons" might enjoy their art "as much as belongeth and appertaineth to the composition and application of outer salves or medicines only, so that they do not vend or expose to sale to others such salves or remedies, according to the common manner of the apothecaries of London." But these provisions were not restrictions, in any proper sense, upon the monopoly of the trade. Physicians and surgeons could only dispense medicine in their own practice; they could not deal in it; and it follows that this statement of the "Encyclopædia Britannica," under the title "Apothecary": "The members of this society do not possess and *never have possessed* any exclusive power to deal in or sell drugs," is incorrect as a legal proposition.

The broad charter obtained for the physicians from Henry VIII. by Cardinal Wolsey, giving their college the licensing power theretofore vested in the clergy alone, which charter Mary confirmed, made the College of Physicians supreme in the whole field of medicine. It could license persons to examine and advise the sick, write prescriptions, dispense drugs,[2] and perform surgical operations;[3] whereas surgeons and apothecaries were narrowly limited in their respective functions.' Whenever an apothecary or surgeon attempted to prescribe for the sick he stood in the peril of the law, and the college was not slow to punish him. Thus in 1602 one Jenkins, a member of the College of Surgeons, did "give judgment on urines and undertake cures." The Censors of the College of Physicians did then cause his arrest, and his counsel obtained, thereupon, a writ of Habeas Corpus; but on the return of the writ it appeared, in answer to the questions of Sir John Popham, Lord Chief Justice, that Jenkins could not justify his practice by the college seal, but could only plead: "I practised as a surgeon, and in that art the use of inward remedies is often necessary." Whereupon Sir John sent him back to durance,

[1] Thus Romeo argued with his apothecary, hesitating to sell poison contrary to law: "The world affords no law to make thee rich; then be not poor, but break it and take this."—Act v., Scene 1.

[1] "Proviso semper quod pro tot et tal' ordinationibus quæ medicamenta aut compositiones et usum earundem concernent' advocabunt de tempore in tempus Præsidentem et quatuor censores, seu Gubernat', Collegi & Communital' Medicorum London, aut alios Medicos Præsidentem prædict' nominand' pro avisamento in hac parte." Charter, May 30, Jac. 1.

[2] See the case of the Attorney-General ex rel Apoth. Co. vs. College of Physicians (1 L. J., Ch. 30, 547), infra.

[3] 32 Hen. VIII., C. 40, 3, enlarging the original charter of the college, recites that the science of physic "doth comprehend, include, and contain the knowledge of surgery as a special member and part of the same," with which statement Dr. Davies, in his pamphlet on medical legislation, compares this saying of Celsus: "*Illud ante omnia scire convenit, quod omnes medicinæ partes inexæ sunt, ut ex toto separari non possint.*"

saying substantially, as Goodall sums him up in his history of the college: "(1) There is no sufficient license without the college seal. (2) No surgeon, as a surgeon, may practise physick; no, not for any disease, though it be the great pox." And Sir John then further laid down six other propositions most disagreeable to Jenkins and like sinners, but of exceeding comfort to the college.

Before the incorporation of the College of Physicians the clergy were the source of license to practise physic. Successive bulls of the popes had failed to toss the priesthood out of this pleasant field of science. The college, as a corporate entity, seemed not only to have inherited the pride that marked the ecclesiastical body and caused the angels to fall, but also to have manifested it by self-mutilation, after the fashion of religious enthusiasts from the time of Atys to our own day. It was astraddle the bladder of professional pride that the apothecary floated on a silvery sea of shillings, sixpences, and half-crowns, to the humble but lucrative position of counter-prescriber and general practitioner, while the physicians, by their own acts, were impotent to stop him.

The surgeons had been originally barbers and smiths, *i.e.*, artificers; the apothecaries had been grocers, and still were tradesmen;[1] so that the physicians, notwithstanding their charter contemplated that they should dispense medicines and treat wounds and sores, enacted by-laws forbidding admission to their body to any who compounded or supplied medicine for gain, "surgeons, drug-compounders, or any other artificers of that sort, lest, perchance, if such men be admitted into the college we may seem not to have sufficiently consulted our own dignity or the honor of our country's universities, which, however, we ought, and we always desire, to attend with the deepest veneration." They decreed expulsion to any member of their college so far forgetting himself as to join the College of Surgeons or Company of Apothecaries,[2] and refused to license members of either body who did not first renounce membership therein.[3] The refusal of physicians to dispense even their own medicines; their requirement of a guinea fee for advice, and the expense and inconvenience to patients, especially in the country, of calling on the physician and apothecary, and possibly the surgeon, for a single case, were sufficient reasons why, in the course of time, the vender of drugs came to be consulted as to their use. Here was the apothecary's opportunity, especially if he had, as was commonly the case, a surgeon's license also. He was not bound to charge a specified fee, and the average man, though unwilling to pay for medical advice, is ready enough to purchase a nostrum. We love to be humbugged in gross ways. A remedy is tangible value for money; if the swallowing of it is followed by considerable discomfort the buyer is all the surer that it is efficacious. Advice, especially if consonant with common-sense, seems less valuable. If a wise physician should prescribe exercise and abstinence from rum to a victim of one of the commonest forms of "malaria," his fee would be paid grudgingly by one willing to spend cheerfully a tenth of his income in Golden Preparations and Certain Ague Cures, while keeping up, at considerable expense, the cause of his symptoms. So it came about that the apothecaries, unmindful of any gratitude they might owe to the memory of those faithful and discreet physicians who assisted their society into the world, and regardless of the limitations of their charter, fell to prescribing over their counters, and from that proceeded to visiting the sick. Let us hope that one cause of their success in gaining patients, as set out by one Doctor Murett, in 1669, in his lamentation over their encroachments on the privileges of physicians, was less important than he seems to have thought it, for he says that physicians unawares had been instructing apothecaries in their science by "sending them to visit their patients to give them the best account they could of the state of their health and effect of their medicines, and of late years taking them with them on their visits," so that during the plague of 1661, "*most of the physicians being out of town*," the apothecaries were enabled to "take upon them the whole practice of medicine."[1] This would imply that the physicians of the period were not only negligent of their duty in fair times, but that they fled their posts in time of danger, a charge savoring more of dyspepsia than of truth.

Whatever the causes were, the encroachments were made and punished during the period between the chartering of the company and the year 1703, when the House of Lords finally settled it in the case of William Rose *vs.* the College of Physicians, that an apothecary might prescribe his own remedies as well as sell them. This case is worth considering, for it was the last important step in the progress of the apothecary toward his present status as a general practitioner of medicine. The facts were these: William Rose being an apothecary, and John Seale, butcher, a sick man, the said Seale did send for the said Rose, who thereupon coming, did shake his head and look as wise as the whole Faculty, at which being much comforted, the thrifty butcher did ask the apothecary to send him something for his cure; whereupon the said Rose, not taking advice of any physician, did send some boluses to said Seale; charging therefor, but not for advice. The case does not state the effect of the boluses, nor is it important; for whether the patient was killed or cured was not material to the proposition of law, that it was alike contrary to the form of the statute for an apothecary to cure or kill. There does not seem to have been any doubt in the minds of the judges when the College of Physicians brought Rose up with a round turn for this his performance. It was argued several times—for Rose, as the result shows, was pertinacious—but the court, having true legal respect for statutes, said, unanimously, yet with a bit of sting in the tail of their judgment: "The making up and compounding medicines is the business of an apothecary, but the judging what is proper for the cure, and advising what to take for the purpose is the business of a physician; therefore, let the distemper be what it will, the prescribing and advising what is fit for it is the business of a physician, though without a fee; but that rarely happens," and it was unanimously agreed that the practice of physic in the meaning of the statute consisted:

"(1) In judging of the disease and its nature from the constitution of the patient, and many other circumstances.

"(2) In judging of the fittest and properest remedy for the disease.

"(3) In directing or ordering the application of the remedy to the disease; and that the proper business of an apothecary is to make and compound or prepare the prescriptions of the doctor pursuant to his directions; and it was agreed that the defendant's taking upon himself to send physic to a patient, as proper for his distemper, without taking aught for his pains, is plainly a taking upon himself to judge of the disease and fitness of remedy, as also of the executive or directory part."[2]

The appeal being taken to the House of Lords, it was argued for Rose:[3] "That the consequences of affirming the judgment would be to ruin all apothecaries, for in that event they could not follow their calling without the license of a physician;

"That constant usage and practice shows that selling a few lozenges or a small electuary to any person asking a remedy for a cold, or in other ordinary or common cases where the medicines had a known and certain

[1] They are so rated to-day in the Bankrupt Act.
[2] See By-Laws of College of Physicians, as recast in 1687.
[3] "Antequam quispiam in permissorum numerum admittatur, si forte chirurgorum aut pharmacopolarum sodalitio olim donatus fuerit, sodalitii istius privilegiis omnibus renunciet," etc. By-laws College of Physicians of 1828. See Attorney-General vs. Royal College of Physicians, infra.

[1] Cited from Dr. More's Outline of Pharmacy in Ireland, in West R. April, 1858.
[2] 3 Salk, 17; 6 Mod., 44.
[3] 5 Bro. Parl. Rep., 553 (Tomlinson's ed.).

effect, where no fee was taken, could not be deemed practice of physic ;[1]

"That such affirmance would give physicians a monopoly of practice to the great harm of the public; for it would lay a heavy tax on the nobility and gentry, who, in the slightest cases and *even for their common servants*, could not have medicine without consulting and feeing a member of the college; it would deprive the poor of any advice; it would be prejudicial to those suffering accident and taken sick in the night who send for an apothecary, who would risk the penalty if he applied the least remedy."

For the college it was argued that:

"By several orders of the college its members were enjoined to treat the poor gratis, and to visit them at their houses;

"That when it was observed that these orders were defeated partially by the high price charged by the apothecaries for medicine, the college erected dispensaries in towns, where free patients could get medicine at one-third less than apothecary-prices;

"That in emergencies, not only apothecaries, but anyone else, might relieve his neighbor, but this was no reason why apothecaries should practise at their leisure;

"That in light indispositions the patient generally prescribed for himself, and the apothecary might lawfully put up the medicine;

"That the most dangerous diseases begin with light symptoms, and the apothecary is not bred to detect them; moreover, he is likely to sell his drugs plentifully, and if he makes a mistake in diagnosis, to cause great harm in what might have been remedied by proper treatment."

In spite of these arguments the Lords reversed the unanimous judgment of the Queen's Bench (how the vote stood does not appear, nor are the reasons from which the conclusion was drawn given. Whether the Lord Chancellor, sitting alone in solemn majesty, decided the question, or whether the lay Lords were affrighted at the prospect of having to employ a physician, as well as buy physic, for their common servants, we cannot know. What is certain is that the judges were reversed); and it was from that time on settled in England that an apothecary may prescribe as well as sell his own drugs. Two questions remained open: Whether an apothecary could recover, in an action at law, fees for medical advice,[2] or write a prescription for medicine not dispensed by him.[3]

In 1815 the Apothecaries' Act (55 Geo. III., C. 194) and in 1825 an act (6 Geo. IV., C. 133) amendatory of it, were passed, revising and confirming the ancient charter of the company. At this time the state of general medical education in Great Britain was deplorable. The case of Rose had established the right of an apothecary, with no other instruction than what he might have picked up in his apprenticeship behind the counter, to practise medicine. The powers of the College of Physicians appear to have been exercised rather too often against competent men, including graduates of the Scotch and Irish universities, and even of Oxford and Cambridge, as in Bonham's case, and too infrequently against veritable quacks and impostors. It was no simple matter to get the license of the college, and yet unlawful for the best-trained man to practise in London without it. The physicians seem to have forgotten that a charter, such as theirs, has no other *raison d'être* than the benefit to accrue to the public from the creation of a class of skilled medical men and the weeding out of the ignorant and inept. There was a little too much of the spirit of trades-unionism in their enforcement of the law, and a too feeble pursuance of the object of their charter as recited in its preamble.[1] The practice of medicine had fallen to a very considerable extent into the hands of quacks and incompetent apothecaries, while competent men were hampered by artificial restrictions. The company, thus freshly re-organized, set themselves about remedying this evil. The right of apothecaries to prescribe being established, the company licensing them now recognized that the right to advise implied the duty of care and wisdom in advice to which medical training and instruction were pre-requisities. They accordingly required candidates for their license to stand successfully examinations in chemistry, materia medica and therapeutics, botany, anatomy, and physiology, and the practice of medicine. The effect was that great benefit accrued from the act; and this was frankly admitted by the physicians who at first disapproved of it.[2] Another effect of the act was to increase greatly the number of licentiates of Apothecaries' Hall as compared with the college. In the decade from 1848 to 1858, the year of the passage of the Medical Act, the licentiates of the College of Surgeons numbered 4,915, many of whom were, of course, apothecaries; Apothecaries' Hall licensed 2,823, and the College of Physicians only 242. These statistics appear to have opened somewhat the eyes of the physicians, and shown them that the framers of their broad charter were wiser, perhaps, in their generation, than were they who drafted the by-laws. But it is a hard thing to admit errors; so that the college did not entirely relax its old rules to meet the new crisis; but in 1860, two years after the passage of the Medical Act, while still preserving in the by-laws the provisions prohibiting membership or fellowship in the college to anyone engaged in trade, or the practice of physic or surgery in partnership, or engaging to share profits on medicines with a chemist or other person, they nevertheless resolved to license a class of persons privileged to compound and dispense medicine in their own practice. Thereupon the apothecaries, who had come to believe themselves alone entitled to engage in general practice, filed an information and bill by the Attorney-General[3] against the college, praying that defendants should be restrained from thus amending their by-laws and granting such licenses. Mr. Roundell Palmer and others represented the college, and the case coming on in April, 1861, Wood, V.C., in an exhaustive opinion, sustained the right of the college under their charter to grant licenses in the entire field of physic.

We have thus seen the English apothecary not only evolve from a grocer into a general practitioner, but even acquire the assurance to attempt the curtailment of the chartered rights of the physicians. But it is not to be supposed that the apothecary, in our sense of the word, that is to say, the chemist and druggist, or, to use the English statutory term, the pharmaceutical chemist, is entitled to prescribe his drugs in England. The contrary has been held in two very recent prosecutions brought by the Apothecaries' Company to show that what was very good reasoning in 1703 to establish the right of Apothecary Rose to prescribe, is very poor logic when applied to Chemists Nottingham and Harrison. These two cases show very clearly the law applicable to counter-prescribing, as it has always been laid down by the law courts, on both sides of the Atlantic. They merit, therefore, full exposition.

In the Apothecaries' Company *vs.* Nottingham,[4] tried

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[1] Compare Apothecaries' Co. *vs.* Nottingham, infra.

[2] A recovery may be had now for both medicine and advice; but if the jury think the charge for the former sufficiently great to include a fee for the latter, they may so find. Toune *vs.* Lady Gresley, 3 C. and P., 581; Handey *vs.* Henson, 4 C. and P., 110; Morgan *vs.* Hallen, 8 Ad. and E., 119.

[3] This is still meat for lawyers. But it is certain that although under the Apothecaries' Act, an apothecary must compound a qualified physician's prescription, he is not bound to compound one written by a fellow-apothecary.

[1] "Cum regii officii nostri munus arbitremur ditionis nostræ hominum felicitati omni ratione consulere; id autem vel imprimis fore, si improborum conatibus tempestive occuramus, apprime necessarium duximus improborum quoque hominum qui medicinam magro avaritiæ suæ causâ, quam ullius bonæ conscientiæ fiduciâ, profitebuntur, unde rudi et cretulæ plebi plurima oriantur, audaciam compescere," etc., of the charter of the Apothecary Company; the act of 3 Hen. VIII., C. xi; and the revisers' notes to Ch. xviii. of the N. Y. Rev. Stats.

[2] Thus Sir Henry Halford testified before a Parliamentary committee: "I must do the apothecaries the justice to say that they have executed that act extremely well, and that the character of that branch of the profession has been amazingly raised since they have had that authority. I only do them justice when I state that, though I was very much against it in the first instance." Cited in West. Rev. April, 1858.

[3] Attorney-General and Royal College of Physicians. L. J., Ch. 30, 757.

[4] 34 L. T. R., N. S., 76.

in January 27, 1876, before Baron Bramwell, it appeared that the defendant, although only a chemist himself, was in partnership with a medical practitioner duly qualified, to whom he always referred such patients as in his opinion were seriously ill. It did not appear that he ever left his shop to prescribe, but it was admitted that he was in the habit of giving advice over the counter in what he considered trivial cases. In charging the jury the learned Baron said: "You have to find a true verdict on the evidence, *whether you like the act or not.*[1] Perhaps you may think that a person has a right to practise as he likes, whether qualified or not; or, on the other hand, you may think that, whereas the poorer classes have no opportunity of judging of or of ascertaining the qualifications of the persons to whom they resort for medical advice, the legislature should require such persons to possess proper skill and knowledge, and to obtain a certificate thereof. No doubt some people like to go to unqualified practitioners so as to get advice cheap; but there is the law, and we have to observe it. If you think this man has 'acted or practised as an apothecary,' then you must find your verdict for the plaintiff. Indeed, I feel some little difficulty in putting the case to you, for on the defendant's own admission he says he prescribed, and that if a person brought a child to him suffering from, say diarrhœa, and asked what was good for it, he gave the medicine; if, however, the case was serious, he sent the doctor. Surely that is acting and practising as an apothecary within the meaning of the act?"[2] Still more recently, in July, 1879, this whole subject was carefully and learnedly considered by Judge Matteran, Q. C., in the case of the Apothecaries' Company *vs.* Harrison.[3] The facts proved were that Julia Caddick went to the shop of defendant, a chemist, said she was suffering from weakness, and asked for something to relieve her. Defendant asked the cause of her weakness; she answered that it was left on her after confinement. He felt her pulse, looked at her tongue, and asked her to describe how she felt. She did so. He made up a medicine and charged only one shilling. Defendant's counsel urged in his behalf every argument brought forward for Rose, whose case, as we have seen, settled the right of the apothecaries to prescribe. He also tried to distinguish the chemist from the apothecary, by the criterion that the former could only practise in the shop, while the latter might visit; but the court said that the apothecary's right to visit was not clear as a legal proposition. Judgment was given for the company plaintiff, and the judge, citing the opinions of Bramwell and Creswell, *supra*, concluded his own opinion with these words, the applicability of which in this State and County is obvious to one familiar with their law and charities:

"I cannot, however, close this judgment without expressing my conviction that the act was intended (which intention has, I think, been successfully carried out) to have a beneficial action on the poorer classes. The more scientific masters of medicine being otherwise engaged, have no time to compound and dispense their own prescriptions; these, therefore, to save more valuable labor, are relegated to the chemists and druggists, who, if not a less highly educated class, are at least a class who have not passed the necessary examination to entitle them to practise as apothecaries. Now if the chemists were permitted to advise on the ailments of the poor, as well as to make up their drugs into medicines, the sick poor would lack the benefit of that highest class of skill which the rich by their purses can command. But this want has been provided for the necessitous at our public hospitals and dispensaries, where the ablest physicians, surgeons, and apothecaries in the land generously give their time and best skill to all comers, on whom not only sickness but poverty is pressing. The counsel for the defendant argued that the poor would suffer by limiting the action of the druggist according to the express language of the act; but to this argument the best answer is given by the act itself, which protects, benefits, and furthers the highest interests of the sick poor, by pointing and directing them to our public medical institutions for advice with reference to their ailments, and to the chemists for their medicines, when such are required, and are not provided for by those noble and charitable institutions."

Here, then, we leave for the moment our apothecary. Having triumphantly established, within less than a hundred years from his abandonment of the grocer, his own right to practise medicine, and having as triumphantly blocked, for nearly two hundred years, encroachments, exactly similar to his own, by the chemist, we have seen him, within the last twenty-five years, lay violent hands upon the venerable college whose members gave him his first start in life as a tradesman of a distinct sort; and we have seen him beaten in this assault, planned in the interest of his corporation as a trades-union, and not as the dutiful public servant that every corporation should be.

The apothecary's history is profitable for instruction. Not its least obvious lesson is that so long as the laws affecting the practice of medicine and the incorporation of medical societies are exercised, in pursuance of their ostensible object—*i.e.*, the furthering of the public welfare by requiring of practitioners conformity to a reasonable standard of professional attainment, those laws can be enforced; but that, whenever such legislation is attempted to be exercised in a selfish spirit of trades-unionism, for the benefit of corporations and their members, and in disregard of the public needs and convenience, the same laws will be nullified by close technical constructions, and if not repealed will fall into "innocuous desuetude." The medical profession in this country has been free, fortunately, from those arbitrary limitations which enabled the untrained apothecary partially to supplant the physician in England, by making it unprofessional for the latter to engage in the practice of medicine to the full extent authorized by the charter of the college granting his license. And there seems to be no adequate reason why the apothecary with us should be suffered to prescribe chalk-mixtures for "light cases of diarrhœa," bromides for "nervousness," and so forth. A judge in this city said some time ago that the court would take judicial notice of the fact that a lawyer could be found in half an hour for any client. And what with hospitals, infirmaries, dispensaries, night medical service, and about twice as many well-equipped physicians as lawyers in the county, there is certainly no crying need for laymen to render medical assistance except in cases of emergency.

[1] Our italics. There are similar New York cases affecting persons practising medicine under the guise of selling drugs.

[2] See Mr. Justice Creswell's distinction between chemists, surgeons, and apothecaries, in Apoth. Co. *vs.* Lotinga, 2 M. and R., 500. The italics are ours.

[3] 67 L. T., 232.

PARENCHYMATOUS INJECTIONS OF QUININE IN AGUE CAKE.—Professor F. Fazio relates in the *Rivista Clinica e Terapeutica* for July, 1886, the case of a woman, thirty years of age, who had suffered from malarial fever, and who had also marked hypertrophy of the spleen. The tumor extended from behind the margin of the ribs to a line drawn on a level with the anterior superior spine of the ilium. It was determined to attempt a reduction in the size of the spleen by means of parenchymatous injections of quinine. The instrument used was the ordinary hypodermic syringe provided with a longer and thicker needle than usual. The bisulphate of quinine was employed, and thirty-two injections of each 4½ grains were made, care being taken to make the successive punctures at some distance from each other. The result of treatment was a reduction of over one inch in the length of the tumor. The injections were not followed by pain or by any other unpleasant symptoms. The experiment was interrupted by the departure of the patient from the hospital, but Dr. Fazio believed that the results obtained were sufficiently encouraging to warrant further trials of the method.

A STUDY OF HERPES ZOSTER FRONTALIS SEU OPHTHALMICUS, WITH A CASE.

By ALFRED HINDE, M.D.,

SURGEON TO THE EYE AND EAR DEPARTMENT, CENTRAL DISPENSARY; INSTRUCTOR EYE AND EAR DEPARTMENT, POST-GRADUATE MEDICAL SCHOOL, CHICAGO, ILL.

T. T——, aged thirty, English, has been in the United States two years, and is a grocery clerk by occupation. He suffered from a very slight attack of small-pox twelve years since, and was then sick two weeks; had only two or three pustules over the entire body; one of these was on the abdomen, another on the right parietal region, but none on the forehead or face; his health was not afterward impaired. Two years later he had what his physician called "congestion of the brain"—had then much headache, but no delirium—and was sick three months, seven weeks of which time he spent in bed. He attributes the attack to overwork. Since this sickness he has had pain in the right knee-joint, but the latter has never been swollen. He has been troubled more or less with dyspepsia; otherwise the patient has been healthy.

There is no history of nervous disease in his family. His mother died of consumption at fifty, and a brother died of the same disease at twenty-five years of age. Family history otherwise good.

Patient first seen by me at the eye clinic of the Central Dispensary, January 22, 1885, when he gave the following history of his present sickness.

During the first week of August, 1884, he was exposed to a draught in the store where he works, and thinks he "caught cold." The following day he noticed a "twitching" of the upper eyelids of both eyes, which lasted for two days. A severe pain over both eyebrows then commenced, and extended upward and backward over the frontal and involving the tissues covering the anterior portion of the parietal regions. The pain was most severe on the right of the median line, and had lasted for forty-eight hours, when he applied ice-cold cloths to the painful parts during one night. Next morning his right upper eyelid was swollen and heavy, and overhung the ball so that he could not see unless he lifted up the lid with his finger-tips. The eyeball was pale, and his eyesight not as yet affected.

The pain over the frontal regions still continued, and he describes its character as lightning-like and intermittent in severity, but at no time was he entirely free from it, and the right side still continued to be the most affected. Besides the painful regions already named, the pain extended half-way down the right side of the nose, but was absent around the tip and within the nasal cavity.

About the time the right upper eyelid swelled he observed a crop of "water-blisters" over the painful region to the right of the median line. After their appearance the pain abated somewhat, but did not disappear. The vesicles appeared so quickly that, to use the patient's own words, "They were there before I knew it." He says there was no swollen, reddened base preceding the vesicular eruption. The fluid in the vesicles was clear. Vesicles were present over the right frontal region, involving the first inch of the hairy scalp; laterally they did not extend below the level of a line drawn from the outer canthus. The greater number were grouped for two inches above the base of the nose and near the median line, some crossing the latter for three-eighths of an inch. Above the right zygoma were two or three. On the upper eyebrow was one linear vesicle nearly one inch in length, extending downward and outward. The skin of the upper eyelid was the seat of two vesicles. Vesicles appeared over the right side of the nose, especially at the base around the internal canthus, and at and around the tip; the outer middle portion of the side of the nose was little involved. There were no vesicles on the lower eyelid, nor on the cheek.

He applied a solution of sugar of lead to the vesicular regions, and crusts formed, remaining several weeks.

The right eyeball became red and inflamed about the tenth day after the first appearance of the symptoms. He had, however, suffered from pain—similar in character to that already described—in the globe of the eye for four days before it became red, and the sight diminished at the onset of the pain. He also suffered from marked photophobia and profuse lachrymation, together with a thick discharge which glued the margins of the lids together, so that each morning he had to moisten the crusts before he could separate the eyelids.

The vision of this eye was now so markedly reduced that he could not see to read any type at any distance, neither could he distinguish one friend from another in the same room. The near and distant vision were alike. He describes his vision as clouded.

Thus the vision of this eye continued for four months, when he noticed it began—more or less suddenly—to clear up a little, but not sufficiently to read any but the very largest advertising type, though he could now discern one friend from another.

The pain, which had continued with almost unabated severity these four months, began to lessen at the same time that the sight began to improve. Now complete intermissions appeared, and these same periods of freedom from suffering have become more and more prolonged, and the painful area more and more circumscribed, until, at the present writing (January, 1885), he has from one to four paroxysms of pain in the twenty-four hours, each of which lasts from fifteen to twenty minutes.

The painful region is of circular form, of about an inch and a half in diameter, with the right frontal eminence as its centre. There is an occasional twinge of pain in the upper ciliary region of the right eyeball.

The pain is still of a stabbing character—comes suddenly, and is gone "before I know it." He considers that it is still steadily abating, though his sight is stationary. He has never been feverish, nor has he felt sick at any time during the attack; he had never before suffered from neuralgia nor other pain, except in the right knee-joint, and this was of a steady, aching character.

Condition January 22d.—Scattered over the right half of the frontal region are pale, punched-out, depressed cicatrices, more or less circular in form, and about the size of half of a No. 4 shot. They are most numerous and deepest near the median line, which they cross for three-eighths of an inch, and they appear grouped irregularly from the base of the nose to a mid-point between the latter and the margin of the hairy scalp. About one inch above the right zygoma may be seen a couple of discrete spots. Situated over the middle of the right eyebrow, among the hair, is a depressed linear scar three-quarters of an inch in length, passing downward and outward. There are two discrete, shallow spots on the right upper eyelid—the latter are the least marked of all the scars.

The skin of the right half of the nose, with the exception of a small portion at the outer mid-region of its side, and limited accurately by the median line, and especially around the inner canthus and over the nasal cartilages and tip, is the seat of grouped and discrete cicatrices similar to the foregoing. The skin of the affected regions is very markedly anæsthetic, as ascertained by the æsthesiometer, though the patient did not appear to be previously cognizant of the fact; that of the lower eyelid and cheek, and also that of the left side appear to be normal.

The right upper eyelid droops somewhat below that of the left eyelid, causing the right palpebral fissure to be the smaller of the two. The right lids appear in other respects normal. The lateral portions of the sclerotic are alone exposed and appear red, due to large, tortuous vessels wending their way from the canthi to the margin of the cornea. Near the latter are seen many more smaller tortuous vessels which fringe the lateral corneal margins. On separating the lids, so as to see the

junction of the sclerotic with the cornea above and below, other large, tortuous vessels are seen crossing over the sclerotic toward the limbus corneæ, where they disappear; the latter above and below is pale and free from the smaller tortuous vessels seen at the lateral limbus. No straight vessels are seen around the ciliary region.

The anterior portion of the sclerotic is more transparent than in health, and shades from a normal opaque-white near the equatorial region to a more or less mottled bluish-brown color near the margin of the cornea—such as seen in commencing annular ciliary staphyloma. This thinning of the sclerotic is most marked below the horizontal meridian of the eyeball.

On the corneal surface, and occupying only the pupillary area of the same, is a punctate abrasion of its epithelium, and, by oblique illumination, the finest superficial milkiness is perceptible, having fine, thread-like processes crossing its surface, but no ulceration.

The right ocular conjunctiva and the cornea are[1] anæsthetic, so much so that he permits my finger-tip to rest upon them without flinching—he says he feels it, but experiences no pain. The same parts of the left eyeball object even to the attempt at touch.

The anterior chamber is shallower than normal, the iris arching forward somewhat and the lens apparently advanced. The iris, of blue color and slightly muddy appearance, has large trabeculæ and looks swollen. The pupil is medium-sized and not strictly circular, the upper and outer portion of the iris being narrower than the remainder. To direct oblique illumination the iris is immovable, but consentaneously the faintest perceptible contraction is seen at the narrower portion. The fundus cannot be distinctly seen on account of the milky cornea, but the media appear fairly clear, for the disk is readily discernible from the remainder of the fundus. The tension of the ball is, if anything, slightly above normal.

The lids of the left eye are normal, sclerotic and cornea healthy, the anterior chamber shallower than normal; the iris, of clear blue color, arching forward slightly and evenly toward the pupil, is very sensitive to light, contracting readily both directly and consentaneously. The pupil is circular and of medium size. The media are clear; disk not transparent yet not perceptibly swollen; its details covered somewhat; its margins not clean cut but veiled, and extending from the latter a finely striated cloudiness is visible. Entire fundus has a misty appearance, so that its finer details are befogged. The retinal arteries, both on and off the disk, are very tortuous, pale, and, if anything, of decreased size. In places the outline of the vessels cannot be distinctly focussed, as if partially obscured in the swollen fibrous layer of the retina, but at no point do they disappear altogether. The retinal veins are straight, possibly a little larger and darker than normal.

Tension plus one. By direct examination I decided patient was emmetropic.

Acuity of vision.—Each eye tested separately. Right eye V= $\frac{6}{LXXX}$, and rejects both plus and minus glasses; made only No. 10 Snellen at 6″ without glasses, and not any glass improves vision. Left eye V= $\frac{20}{XXX}$, and rejects both plus and minus glasses; sees Snellen's half circle equally distinct; reads No. 1 Snellen at 6″ to 13½″ without glasses, thus showing normal accommodation.

He considers that his vision with this eye is not as acute as before the disease commenced.

In the early period of the disease he had used a solution of atropine night and morning for one week. Knowing this, and being desirous to ascertain if there was a posterior synechia of the right eye, I inserted a very small portion of an ointment of atropia and morphia between the lids. After waiting forty-five minutes—being busy during this time—the pupil was seen to be egg-shaped, with the small end upward and outward, corresponding to the movable and narrowed portion of the iris. Three-fourths of the iris remained fixed, and the remaining fourth contracting caused an apparent displacement of the pupil up and out. The fixed iris looked more swollen, and its enlarged vessels were visible, giving it a brownish color. He said his eye ached during the first fifteen minutes after the application, and on questioning him now on the effects of its previous use he said the eyeball ached after each instillation, and during the latter two of the seven days the suffering became so great, and the cloudiness so marked, that the surgeon in charge stopped the further use of the atropine. The tension now seemed to be slightly reduced, but on palpation over the upper and outer ciliary region, contiguous to the contracted iris, he complained of pain; on previous palpation such was not mentioned.

The disk could be seen slightly more plainly, but not sufficiently so to satisfactorily describe.

Remarks.—From the distribution of the cutaneous scars it will be seen that the affected regions receive their sensory nervous supply from the frontal, lachrymal, and nasal branches of the ophthalmic division of the fifth cranial nerve. The couple of pits above the right zygoma are in the region supplied by the temporal branch of the upper maxillary nerve. This temporal branch, however, in its course through the orbit, receives a filament from the lachrymal nerve, and we may justly attribute the temporal scars to these added fibres. The lower lid receives its entire sensory supply from the palpebral branch of the superior maxillary nerve, and was not involved.

The ocular inflammation was transmitted through the ciliary nerves and lenticular or ophthalmic ganglion—which latter receives its long, or sensory, root from the nasal branch of the ophthalmic nerve—or directly from the nasal branch through the long ciliary nerves. The ciliary nerves—short and long—supply the eyeball. Thus we can trace the disease to the branches of the ophthalmic nerve; but is this the *fons et origo*, and what is the pathological process involved?

The patient was observed without any local treatment until February 5th, when eserine (gr. iij. to ℥j.) was instilled into the right eye. From the 5th to the 15th, owing to the extremely severe weather, the distance, and an acute catarrh, the patient's attendance has been very irregular. During this period of ten days eserine has been used six times. The right pupil before the instillation had a diameter of four millimetres, and thirty minutes afterward a diameter of two and a half millimetres. The contracted pupil occupied a position within the lower inner quadrant of the cornea, in the angle formed by the horizontal and vertical meridia of the same. He has never experienced the slightest intraocular uneasiness at the time of, or between, the applications. Soon after the first use of eserine the previously continuous cloudy vision commenced to clear up somewhat, but only momentarily, relapsing again into thick cloudiness; later the cloudiness appeared less marked, and the clear interval more clear and prolonged; still later the clear intervals appeared twice daily, and lasted longer each time; now (15th) they recur three or four times daily, and he notices that his vision is always clearest in the early morning, and the cloud is steadily decreasing in density, and he can, for the first time since the onset of his eye-disease, read the clock in his room at eight feet distance. From January 22d to February 5th the right eyesight was stationary ($\frac{6}{LXXX}$), but during the last ten days with this eye the vision has risen to $\frac{12}{LXXX}$—just double the amount.

The second testing occurred on January 28th. At this time the left eye had a vision of $\frac{20}{XXX}$, and the right eye same as at first. Internal treatment commenced at this date, and consisted of cod-liver oil, quinine, and iodide

[1] I requested the patient to cut in two an onion, and hold each half near each eye, at the same distance off and at the same time, and on his next visit tell me what he observed. He stated that in the right eye he had neither pain nor lachrymation, but in the left he experienced both pain and increased lachrymation. I have since tested the same on two occasions, and with the same results, viz.: in the right eye no pain and no tears, whereas in the left pain was experienced and the tears flowed down the cheek. This experiment was tried on account of a similar observation noticed by one of Anstie's patients and referred to elsewhere.

of potassium, each given separately. On February 8th, eleven days after the commencement, the vision of the left eye had risen to $\frac{20}{XX}$—normal.

March 3d.—During the last seventeen days eserine has been instilled into the right eye twelve times, and there has been a steady improvement in the acuity of vision, without the least intraocular irritation in this period of time. The vision has not been, neither is it yet, a constant quantity, varying from slight cloudiness (on exposure to bright light or due to fatigue) to very distinct vision (especially on first rising in the morning before exposure to light, and again in the evening).

In the store where he works he is exposed to the glare of the electric light, and he probably thinks correctly that this is the cause of his fluctuating vision.

During the last three or four visits I have noticed a steadily increasing injection of the ocular and palpebral conjunctiva of the right eye, until at the present there is an acute conjunctivitis. I consider the latter due to the eserine instillations and have stopped the same. There is, however, no intraocular irritation. Acuity of vision of the right eye, tested March 1st, and found as follows, the light being only fair: $V => \frac{20}{LX}$; deciphers half the types correctly; reads No. 1 Snellen at 8″ with some difficulty, and No. 1 Jaeger readily at 6½″ to 10″, easily by choice at 7″.

He says he has been able to read ordinary newspaper print since February 20th with this eye. The cornea and media are now transparent, and the fundus can be readily seen, and to avoid needless repetition, I may state that in all its present characters it is similar to the left fundus already fully described.

The cornea, conjunctiva, and skin are still as anæsthetic as when first seen. He has been entirely free from all neuralgia for the past two weeks.

Since writing the foregoing history, which may be considered a typical one of the disease, with the exception that usually the vesiculation and scarring is limited by the median line, through the kind permission of Dr. E. L. Holmes, I have had the opportunity of consulting the fifth and sixth volumes of the "Royal London Ophthalmic Hospital Reports."

In these I find recorded 51 cases of herpes frontalis. Jonathan Hutchinson has collected 41, of which 26 were his own, occurring during a period of eight years. Mr. Bowman reports 9 cases, all his own, observed between the years 1855 and 1866. Dr. F. M. Mackenzie records one case in the *India Medical Gazette* of August 2, 1861. Together with the accompanying case these make 52 cases, and the subject of our present study.[1]

Unfortunately the records of the 52 cases are in many respects so imperfect that they greatly limit the usefulness of our study. Especially is this so in regard to the complications. The notes referring to the ocular inflammations are unfortunately so limited as to actually leave us in the dark as to the character of the same and its exact effects—the tension of the ball scarcely referred to, the acuity of vision rarely mentioned, and ophthalmoscopic description in one case only besides my own given.

Of the 52 cases, 31 occurred in males and 21 in females. The youngest patient was three and a half years of age, the oldest seventy, and of the later age there were two examples. The average age of fifty of the cases—in two it was not given—was 37.31 years. Before the tenth year there were 4 cases; between the tenth and twentieth years, 6 cases; between the twentieth and thirtieth years, 9 cases; between the thirtieth and fortieth years, 3 cases; between the fortieth and fiftieth years, 8 cases; between the fiftieth and sixtieth years, and the sixtieth and seventieth years, in each 10 cases.

The period of greatest immunity from the disease was during the fourth decennary, the largest number occurring equally during the sixth and seventh periods of ten years. Up to and including the fortieth year there were 22 cases; from the fortieth to the seventieth year there were 30 cases. The above would seem to show that the latter half of life is the period of greatest frequency of the disease. Where the previous health of the patients is referred to, in 20 cases it was good, in 5 it was feeble.

In 25 cases the right side was implicated, and in 22 the left was alone involved; in 5 cases the notes are imperfect.

From the distribution of the vesicles or the remaining scars, the first division of the trifacial was alone the diseased nerve in 48 instances. In the remaining 4 cases the superior maxillary nerve was implicated with the ophthalmic.

Motor disturbances were present together with herpes in 4 cases. The third nerve was affected in 3 of these, being completely paralyzed in 1, divergent strabismus existing—this case, however, made a complete and rapid recovery; in another there was partial ptosis, whether permanent or not is not stated; in the third case, ptosis, with markedly dilated and fixed pupil, was present, but no recti muscles were paralyzed or impaired; in the fourth case permanent internal strabismus was present, thus showing a paralysis of the sixth nerve and external rectus muscle. Hutchinson also states (vol. v., p. 258): "In all the cases which I have seen, in which the eye was affected, paralysis of the iris and total immobility of the pupil ensued."

Following Hutchinson's method we find that in its entirety the ophthalmic nerve was affected only in 2 cases; its frontal branch alone in 20 cases; the frontal and trochlear in 15; the frontal, trochlear, and oculo-nasal in 13; the superior maxillary in part, and all the ophthalmic in 1 case; the superior maxillary in part, and the frontal branch of the ophthalmic in 2 cases; the superior maxillary in part, and the frontal and oculo-nasal branches of the ophthalmic in 1 case.

In the differentiation of the affected nerve branches Hutchinson considers it difficult to state whether the lachrymal nerve is involved or not, yet he thinks where there is much upper-lid eruption, with "great swelling and much conjunctival congestion, we may safely believe that the lachrymal nerve is concerned."

It would seem more difficult to separate the lachrymal nerve from its share in cases of zoster frontalis than it would be to state in which cases it was involved. True, its fibres run side by side with, though separated from, those of the most frequently affected of all the branches of the ophthalmic, viz., the frontal, and we might infer that the origin of the two sets was the same; yet if this were so, they need not necessarily be both implicated, for, as will be seen later, it seems possible to have limited peripheral examples of this disease.

Seeing, however, that the lachrymal gland and upper lid receive their main nervous supply from the lachrymal branch, and seeing also that through the latter's connection with the temporal branch of the superior maxillary nerve it aids in the supply of the temporal region; again, seeing that upper-lid vesiculation and swelling, together with profuse lachrymation, and also temporal scarring, are present in the large majority of cases of herpes frontalis, we think we are justified in considering that it is the rule for the lachrymal branch to be involved in this disease.

Therefore a more simple division of the cases would be as follows:

Frontal and lachrymal nerves affected in 35 of the 52 cases; frontal, lachrymal, and oculo-nasal in 13; first and second divisions of the fifth, more or less combined, as before referred to, 4 cases.

The eyeball of the affected side became inflamed in 19 cases; in 6 of the others the eye is not mentioned; in 2 other cases there was conjunctivitis only. In the case where the third nerve was completely paralyzed the nose escaped and the eye was not inflamed. In the case of internal strabismus with diplopia the nose escaped and the eye did not inflame.

[1] Undoubtedly many more cases could have been collected, but these are sufficient, and time forbids further search.

In the 19 cases in which the eye inflammation accompanied the zoster there was an associated nose implication in 15 of them; 13 of these occurred in Mr. Hutchinson's series, one only occurring in Mr. Bowman's cases (the remaining one is my own patient). Mr. Bowman records 4 cases of eye inflammation without any affection of the nose, though the forehead and infra-orbital regions were both involved in one of these. Vesicles or scars were present in 5 cases—all Mr. Hutchinson's—yet the eye was not inflamed. Here it may be remarked, however, that there were only one or two in each case above the mid-region of its side, and usually not below the level of the inner canthus. In one of these five cases ptosis was present, showing paralysis of the levator branch of the third nerve.

Thus Mr. Bowman had nose implication in 2 out of 9 cases, together with 4 cases of eye inflammation without nose involvement, whereas Mr. Hutchinson had 18 cases in which the nose was affected out of a total of 41, but not a single case of eye inflammation without an associated nose disease. We need not wonder, then, from their widely different experiences, that they should differently construe the same. On this subject Mr. Hutchinson says that he has never seen the whole side of the nose affected without also witnessing inflammation of the eye, and has never seen the eye inflame unless the side of the nose showed vesicles.

Bowman says he has not found affections of the eyeball to occur specially in those cases of ophthalmic zoster in which the eruption followed the course of the nasal branch.

Mr. Hutchinson says later that his rule ought perhaps to be modified a little, but that "it would be quite safe to assert that the eye scarcely ever suffers much when the nose is not affected, and that the severity of the eruption on the one part is usually in direct relation with the severity of the inflammation of the other."

Thus we have different views expressed by the early recorders of this disease. Though both are partially right yet neither expresses the entire truth. We will try to explain the nose-scarring without the eye inflammation, and the eye inflammation without nose disease. With one exception, in the cases of nose implication occurring without subsequent eye disease the scarring was limited to the upper half of the nose, was usually seated above the level of the inner canthus, and was in amount slight. Here the region of the trochlear nerves is alone involved. The supra-trochlear branch of the frontal leaves the orbit above the pulley of the superior oblique muscle "to end in the eyelid and forehead. Before the nerve turns round the margin of the frontal bone it sends downward a branch of communication to the infra-trochlear branch of the nasal nerve" (Ellis, p. 47). Again, the infra-trochlear branch, before it "leaves the orbit receives an offset of communication from the supra-trochlear nerve," and "it ends in the upper eyelid, conjunctiva, and side of the nose."

Now, on account of this communication with the frontal nerve, and seeing that the latter is the most frequently affected branch in cases of herpes frontalis, are we not justified in considering that these few upper-nose vesicles were due to these added fibres, and that the nasal nerve was not implicated at all? Thus the five cases of Hutchinson with nose-scarring and no eye inflammation may be explained and his amended rule still hold good.

But what of the case where the vesicles were present all over the side of the nose "to its tip?"

The terminal fibres of the nasal nerve are distributed over the cartilagino-cutaneous surface around the wing and tip of the nose, yet these fibres may not be the only sensory nerve-supply to the side of the nose below the inner canthus, for Ellis (p. 115, seventh edition), in speaking of the infra-orbital branches of the superior maxillary nerve, writes, "some incline inward to the side of the nose," and again, "the branches for the side of the nose supply the muscular and tegumentary structures."

Moreover, in Case 8 (vol. vi., p. 9) of Mr. Bowman's series, "there were marks of the herpetic eruption over the right forehead, and a small patch over the infra-orbital foramen, but none on the side of the nose." This would seem to show that only a few of the fibres of the infra-orbital branches were involved. Again, we must refer to another apparent anomalous distribution of the vesicles, as shown in Case 2 of Mr. Hutchinson (vol. v., p. 197), where "the mid-region of the left side of the nose was covered with vesicles extending exactly to the median line and no farther. Neither the lower part (ala) nor the upper part of the side of the nose was affected," and in this case "the eye itself was nowise affected."

In this case the nasal branches of the superior maxillary nerve would seem to be involved.

It would seem from these cases that the nose eruption is not necessarily dependent on the nasal branch of the ophthalmic. And if it be, the apparently limited peripheral cases of the second division of the trigeminus just related would premise a possibility of only a few filaments of any nerve becoming affected, the remainder of the trunk being sound. If the latter argument be accepted, we may not only explain Mr. Hutchinson's puzzling case of entire nose implication and no eye disease by believing that the fibres of the long sensory root of the lenticular ganglion and those of the long ciliary nerves were healthy; and again explain by it the four cases of Mr. Bowman, of eye disease without associated nose disease, by considering that the ocular fibres of the nasal nerve were involved, whereas the terminal filaments of the same nerve remained healthy. This, however, overthrows Mr. Hutchinson's amended rule, and would seem to show that from the cutaneous complication no rule can be formulated whereby we can foreshadow the probability of eye disease in any of these cases.

This we believe to be the truth.

Again, if this be true, we might still further speculate, and think it probable that in such cases as the above we had instances of only peripheral disease, possibly due to external causes.

When does the eye become inflamed?

Before answering this question we must refer to a wax model in Guy's Hospital, the notes appended to which say that the boy "was attacked with inflammation of the eye, and at the same time the herpetic eruption appeared."

If these notes are accurate, the possibility of the coincident appearance of the cutaneous and eye complications of zoster frontalis is proven. In point of time they both appear subsequently to the neuralgia, and in our 55 cases the eye complication follows, usually by a distinct period, the skin disease.

In 11 of the 19 eye inflammations the notes are imperfect and no statement given. The eye became inflamed two days after the appearance of the skin eruption in Case 5 of Mr. Bowman's series, and this is the shortest period stated. The case with the longest interval was one in which the eye was first affected one month after the vesicles appeared. Both Mr. Hutchinson and Mr. Bowman think the eye affection does not appear until after the eruptive stage has reached its height, or has begun to decline.

What tissues are involved in the ocular inflammation?

In the 19 cases the cornea alone was affected in 5; the cornea and iris together in 4; the iris alone in 2; the conjunctiva, cornea, and iris in 3; the conjunctiva, cornea, and lens in 1 case. In the 4 remaining cases the eye was practically lost. In one of these atrophy of the optic disk was diagnosed; in another, "most of the tissues of the globe, cornea, conjunctiva, sclerotic, and iris" were involved, and in the case accompanying this paper, besides the cornea, iris, and sclerotic, most probably the remainder of the uveal tract and retina were inflamed. If we bulk the cases, it will be seen that the cornea was affected in 14 of them, and the iris in 10;

thus the cornea is the part most prone to inflammation, and the iris only a little less so.

The acuity of vision and eye-tension is not referred to in 10 of the 19 cases. In one case the "globe is slightly prominent;" in another, "had no useful vision;" in a third, "cannot make out large ordinary print at all;" in another, "the sight was much impaired." In only one case of Hutchinson's is the exact acuity of vision stated, viz., $\frac{10}{100}$, and the tension is not referred to. In my own case the tension was plus normal, the acuity of vision $\frac{6}{LXXX}$, and could read only No. 10 Snellen at 6".

In reporting cases the ophthalmoscope ought to be used where possible, palpation applied, and the acuity of vision given.

The etiology and pathology of this disease cannot well be separated. On this subject Bowman thinks that zoster is a peripheral disease, having its primary seat in branches of the nerves of common sensation.

Hutchinson is rather undecided in his views, at one time considering the disease to be of central origin, at another that possibly some cases are of peripheric origin only. It would seem that he was right, and that occasionally we may have cases of essentially peripheric origin and extent. The importance of this matter, in its influence upon the treatment of this disease, cannot be overestimated, for if herpes be always due to central disease, local surgical interference would be always contra-indicated; whereas, if we could know that we had a strictly peripheral case, exsection of the affected nerves would offer the most rapid and complete relief from the neuralgia which is the bane of this disease.

Bowman has mentioned cold as a possible external cause of this disease, and my own patient was conscious of being exposed to a draught, and "caught cold," the day before the disease commenced.

The lamented Anstie, in his work on Neuralgia (1871, p. 161), says: "The effect of a continuous cold *draught* of air impinging on the naked skin for some time is comparatively frequently seen in the provocation of a neuralgic attack; we say comparatively, because this influence is more frequently effective than blows, wounds, or temporary irritations of any kind applied to the peripheral ends of sensory nerves. But if neuralgia be a more frequent consequence of cold than of these other influences, a moment's reflection will show that it is by no means an absolutely common result."

Our pathology and etiology thus are far too general and indefinite to leave at the present stage, and in Anstie's conclusions, gained from his own experience and founded on that of others, we will, with the least time and space, find all that is requisite or known to further elucidate this part of our study. He writes: "Hereditary neurosis is an important antecedent of neuralgia in at least a very large number of patients. Neuralgia has no 'pathology,' if by that word we intend to signify the knowledge of definite anatomical changes always associated with the disease. It also possesses no demonstrable 'causes,' in the old metaphysical sense." He considers "that the essential seat of every true neuralgia is the posterior root of the spinal nerve, in which the pain is felt, and that the essential condition of the tissue of that nerve-root is atrophy, which is usually non-inflammatory in origin;" and at p. 190 he writes: "The trigeminus is in all its characters a spinal nerve, but it has sundry peculiarities both of structure and connections with other nerves."

From this it will be seen that he regards neuralgias as almost, if not wholly, of central origin.

Among the reflex influences that take part in the etiology and complications of neuralgia we shall only refer to those which more nearly apply to our special study: 1. "Neuralgia in a sensory nerve may (and almost always does to some extent) produce secondary vaso-motor paralyses. These paralyses may affect fibres which run in the same branch of the nerve as that which is painful, or fibres that run in another branch of the same nerve, or fibres that run with another sensory nerve, or the ganglionic chain of the sympathetic itself.

"In the present state of our information I am inclined to explain all the congestive complications of trigeminal neuralgia on the basis of vaso-motor paralysis. And I further believe that the cause of that paralysis is a direct extension of the original morbid process from the sensory root to the motor, affecting the origin of fibres in the latter which are destined to govern the calibre of ocular and facial vessels."

He is willing to admit that increased secretion may possibly be explained by vaso-motor paralysis, but the mere cessation of vaso-motion will not account for such facts as the rapid and simultaneous development of erysipelatous inflammation, of corneal clouding and ulceration of iritis and glaucoma, or nutrition changes in hair or mucous membrane, and considers "that there is a special set of efferent fibres in the trigeminus, emanating from the motor root, whose function it is in some unknown way to preside over the equilibrium of molecular forces in the tissues of which the nerve is distributed—trophic nerves, in fact, though not active dilators of blood-vessels."

2. "Neuralgia in a sensory nerve may increase, alter, or (more rarely) suspend the secretions of glands supplied by fibres bound up in the same branch, or in another branch of the same nerve, or in a different nerve with which it is connected, only through the centre, or (possibly) only through a plexus.

"In the great majority of cases the affection is in the direction of increase, at least the watery elements of secretion are often poured out in profusion. Thus profuse lachrymation is exceedingly common in ophthalmic neuralgia.

3. "Neuralgia in a sensory nerve can produce paralysis of muscles supplied by motor fibres bound up with the painful branch or with another branch of the same nerve, or in muscles supplied by a totally distinct nerve connected only through the centre."

In this, Hutchinson's idea, that cases of zoster frontalis with motor complications are instances of central origin of the disease, is indorsed. The above statement would scarcely apply to paralysis of accommodation usually present in the cases of eye complication of zoster, and due most probably largely to compression of the nerves supplied.

Anstie regards paralysis of muscles, secondary to neuralgic affections, as "pretty common," and further writes: "I find that in twenty-eight of the hundred cases which have been referred to, no less than twelve were connected with neuralgia of the trigeminus, and in most of these it was one or more of the muscles connected with the eye that were affected.

4. "As regards vision, besides minor perversions, I have observed more or less complete amaurosis in several instances of ophthalmic neuralgia; in one case it was absolute, and lasted, with but slight improvement in the intervals between the paroxysms, for nearly a month, but disappeared entirely, though somewhat gradually, after the final cessation of the neuralgia."

When considering diagnosis Hutchinson writes: "It is often considered to be erysipelas."

Undoubtedly Anstie has made the common mistake, for he continues: "In the first case I saw (a woman of thirty-two) nothing could be more startling than the rapidity with which an irregular patch of skin, including half of one cheek, the side of the nose, and a large part of the forehead and scalp on the same side, became converted into the dense, fiery-red, brawny tissue, with minute vesicles scattered over its surface, which looks so characteristic of erysipelas. This commenced immediately on the subsidence of severe neuralgic pain."

This is a typical case of facial zoster, implicating the first and second divisions of the trigeminus.

Anstie reports two cases which are of extreme interest because different from any of those reported by Hutchin-

son or Bowman, one of them being the only instance we have found where the third division of the fifth nerve was involved in the disease.

That they were cases, not of erysipelas, but of trigeminal neuralgia, with its skin and eye complications, I have no doubt. The only likeness to erysipelas that I can find in the one in which the third division of the fifth nerve was involved was the "continuous deep-red color," which Anstie notes, of the soft tissues of the affected nerve districts; but this redness is not by any means peculiar to the erysipelatous inflammation; and the only item that was lacking in the case to make it a typical one of zoster frontalis was the absence of vesicles. Here we are confronted with the question: Is it an accident, or is it essential to have vesicles present in cases of herpes zoster? It would seem that we may or may not have vesicles present in cases of zoster frontalis, according to the character or grade of the secondary inflammation accompanying these cases of trigeminal neuralgia.

The other case reported by Anstie is a very remarkable one, as it seems to prove that there may be repeated attacks of zoster. The family history of the patient was peculiar. All the members of the family of the patient's mother, for two generations, had died at middle age of apoplexy or some disease involving hemiplegia.

Now we have been taught that zoster only occurs once in a lifetime, and with all the credence and respect that is due seniority we have not doubted the statement until the perusal of this second case. We must not forget, however, that in the past a second attack of syphilis, measles, scarlet fever, and small-pox was considered impossible. Yet it is now known that there are certain individuals who are especially prone to contract a second or more attacks of the exanthemata. The supposed rule is little less valuable in practice on account of these few exceptions, yet to-day it is not arbitrarily taught.

If the disease that we are now considering be essentially a neuralgia with added parts—and still further evidence could be adduced that would show the same to be the case—and knowing that the repetition or continuation of the causation of the same will in ordinary neuralgia invoke other attacks, why is it invariably impossible to have a recurrence of this form of the disease?

Clinical experience has proven that it must be extremely rare, or the supposed rule of protection from subsequent attacks would never have been formulated.

In this second case of Anstie's the remarkable neurotic history is little less striking than is the apparent repetition of attacks of facial zoster, yet he would seem to regard the inflammation as erysipelatous in character, and he fails to mention scarring as remaining after one attack. Reference is not made to scarring resulting from herpes frontalis in his work, yet it is well known to be the rule, and this dermatological landmark must, in some of his cases at least, have been overlooked.

Herpes zoster is a neuralgic disease of the affected nerve branches—in this instance those of the fifth. The neuralgia always precedes for a variable period the cutaneous inflammation; it is always limited to the known distribution of the affected nerves; it is[1] almost invariably accurately limited by the median line; the attack is not accompanied by constitutional symptoms.

The eye complication is peculiar to neuralgia of the ophthalmic nerve.

The above are sufficient to differentiate any case of facial zoster from erysipelas, for they are present—with the exception of the eye complication—before the cutaneous inflammation appears.

After the latter is present in zoster it closely follows the distribution of the neuralgia; in erysipelas it abhors any limit. The vesicles, when present, also follow only the distribution of the diseased nerves; are usually smaller, more numerous, and grouped: very different are the erratic and fewer bullæ of erysipelas. The vesicles and their débris remain from one to many weeks in zoster, the pain, though frequently abating when the eruption appears, still being usually present.

After the scabs drop off, in the young, an injection of the vessels over the seat of the eruption does not usually disappear for many more weeks; whereas in the aged, whose reparative processes are on the wane, we may have actual and persistently painful ulcers.

The patient who has once suffered from a typical attack of herpes zoster carries around with him, and may be recognized years afterward by, the permanent, depressed, punched-out, pit-like, white, discrete, and grouped cicatricial scars covering the former seat of the disease.

The scars are most distinct over the regions where the soft, subcutaneous tissues are most plentiful, viz., over the median frontal region and hairy scalp, also over the temporal region and the eyebrow. They are least marked, and almost imperceptible, over the thin, fine, skin of the eyelids.

Lastly, the neuralgia that is least marked in the youthful patient, and may remain with him a variable period of a few days, weeks, or months, may, in the aged and feeble, end only with the termination of life.

The remaining anæsthesia of the skin in the region of the affected nerve-districts has been already mentioned, and we have only to add that the eyeball when inflamed is also left in a more or less markedly anæsthetic condition.

With such a picture is it possible to confound this disease with erysipelas?

It seems more incredible to think that a neurologist of Anstie's calibre could have seen any relationship between the cutaneous inflammation of trigeminal neuralgia and that of ordinary erysipelas, which loathes any limit—anatomical or clinical—than it is for ourselves to believe that his second reported case was a true example of zoster frontalis, in whom there appeared three separate attacks of this disease.

That it was not a case of ordinary erysipelas few will deny. In the first attack the "erysipelas was accurately limited to the right half of the face." This speaks in favor of zoster, yet by no means is it impossible to have the limit of an attack of erysipelas to one or other side of—though not likely to be "accurately limited" by—the median line, which it is so prone to transgress on the face.

About four and a half years after the first attack, and preceded for a period of fifteen or sixteen days "with violent intermittent neuralgia," a second "attack of erysipelas strictly limited to the district of the painful nervous branches then set in." Yet another "attack of erysipelas occurred some three or four weeks after the first," and "the neuralgia disappeared about four months after its first occurrence. The pain was accompanied by intense conjunctival congestion and photophobia," and the eye was practically lost, for ophthalmoscopic examination was impossible.

Zoster has been mistaken for eczema in its vesicular stage, but the mere mention of the fact is all the interest it possesses for our study; a careful observation will readily prevent such an error.

Anstie reports other cases which illustrate the steps from the ordinary keratoiritis to the complete double glaucoma following, and the result of trigeminal neuralgia.

These, together with the case of my own patient, though not warranting a positive opinion, yet lead me to the belief that the character of the ocular inflammation of neuralgic zoster is *serous*, and though we have in the cases of our study evidences of posterior synechia, yet in cases of so-called serous iritis we may have present sufficient plastic material thrown out to agglutinate the *posterior* surface of the iris to the lens capsule.

I consider that the iritis is *serous*, and with a marked tendency to extension of the inflammation to the ciliary body, and still further to the choroid, and that, owing to

[1] Thus worded on account of the exception in my own patient. There are undoubtedly other instances, but unknown to the writer.

a vaso-motor paralysis only, or together with the influence of the special set of trophic fibres bound up in the trigeminus, and referred to elsewhere, we have a dilatation of the ocular blood-vessels with serous inflammatory exudation into the vitreous chamber, causing an increased intra-ocular tension, resulting, if sufficient, in inflammatory glaucoma in a proportion of the cases.

If this be so, its bearing on the management of the ocular complication of cases of zoster frontalis is obvious—so that, if possible, previous to the iritis, or, at least, previous to the glaucomatous condition, we may, by resort to prophylactic treatment, prevent, if possible, the onset of the latter disastrous result.

Before referring to treatment of zoster frontalis, a word more may be written on the character of the pain present in these cases, on account of its bearing on the matter of prognosis.

In our fifty-two cases neuralgia is mentioned in twenty-six as being more or less severe; in the remaining cases, in many of which the notes are too brief, because unobtainable, to call histories, the pain is not referred to. The pain was of a lightning-like character, paroxysmal, came unexpectedly, and was gone as quickly. It preceded, for some time, the eruption, and was localized to the affected nerve-districts, and lasted, after the acute stage of the complications, a variable period—speaking generally, the shortest time in the youthful patient, and the longest period and most severe in the aged. In one case it was present six years afterward, in another four years, and in Trousseau's cases five and fourteen years respectively. For this distressing symptom alone some sought advice.

Anstie writes (p. 54): "I have known one patient, a woman over seventy years of age, absolutely killed by the exhaustion produced by protracted suffering of this kind."

As to the degree and importance of the pain at different periods of life, Anstie says: "Painless herpes is commonest in youth. From the age of puberty to the end of life the tendency for herpes to be complicated with neuralgia becomes progressively stronger," and, referring to its recurrence after the cutaneous outbreak, he further writes: "In old people it almost always does return, and often with distressing severity and pertinacity. Six weeks or two months is a very common period for it to last, and in some aged persons it has been known to fix itself permanently, and cease only with life."

Treatment.—The general and main treatment of herpes frontalis is undoubtedly that of the neuralgic state on which it depends. Therefore, in all cases—whether peripheral or central in origin—we must treat this disease by properly selected constitutional methods.

Cod-liver oil, strychnia, arsenic, and iron are all useful. Quinine is valuable in these cases, and Anstie says: "It is a fact that quinine does benefit ophthalmic neuralgias where there is no room for suspicion of malaria." He recommends two-grain doses three times daily. At any period of the disease hypodermics of morphia, together with chloral and bromide of potassium for their hypnotic effects, are valuable as temporary aids in the treatment of the neuralgia.

For the skin complication topical treatment is required, and among the best remedies are sedatives and those which exclude the air, "by which we seek to mitigate the paroxysm" of pain at its apparent site. Anstie says: "Very much the best agent of this kind is the flexible collodion. In neuralgic herpes and erysipelas the effect of this agent, conjoined with the hypodermatic injection of morphia, is of the greatest possible service in mitigating the pain. In herpes it prevents the occurrence of sores after the vesicles fall," frequently troublesome in the aged, "and which very much increase the severity" "and intractability of the consecutive neuralgic pain." To the ordinary flexible collodion the addition of the local anæsthetics, iodoform and the more powerful, though less permanent, hydrochlorate of cocaine would seem to increase the anodyne results. The latter remedies might, however, be used in solution, and applied when needed for the pain. Ether in the iodoform solution would increase its effects. A cap of cotton, that was found useful in one of Bowman's cases, covering completely the painful nerve-districts, would probably be a serviceable addition to these remedies.

Anstie also suggests the application over the painful nerve-districts of the tincture of aconite, or veratrine ointment, only in those cases where the skin is unbroken after the inflammation has passed entirely away, or in those cases where the skin was not complicated.

Speaking of blisters in neuralgia, Anstie considers Valleix's assertion, "'that they are the best of all remedies,' is not very wide of the truth," though not universally applicable. He agrees also with Valleix that "flying blisters" are preferable to the plan of keeping the blistered surface open and irritated. Anstie regards blisters as "true stimulants of nerve-function," and in order to thus act "it will be necessary that the skin irritation be either produced at some distance from the seat of greatest pain, or if applied in the spot it shall be comparatively mild in degree." He, therefore, applies "the blister at some distance from the focus of pain," but in choosing the site "there must be an intelligible channel of nervous communication between the irritable portion of skin and the painful nerve."

Blistering, however, is a remedy which is not well suited to aged subjects, and for such the "continuous applications of moist warmth," together with the use of chloroform liniment and mild rubefacient remedies, are to be preferred. Anstie speaks in the highest terms of the value of galvanic electricity, but does not favor Faradism in true neuralgias.

Now we come to the discussion of surgical interference in those cases where the neuralgia, in spite of all previous methods of treatment, still persists, rendering even life itself irksome to our unfortunate patient.

Again to Anstie we look, who says, in speaking of resection of nerves: "Neuralgias of the trigeminus are pretty nearly the only cases in which the proposal of neurotomy or neurectomy ought to be entertained. Resection of painful branches of the trigeminus has been performed in a great number of instances, more especially by German surgeons, with results that merit our attention. On the other hand, with the exception of simple division of the nerve, which can be subcutaneously performed, and is a trivial proceeding (but has very short-lived effects), these operations are by no means without danger, especially where they are pushed to such a length as the opening of bony canals and the resections of considerable portions of bone, in order to get sufficiently far toward the centre, and fatal results have in more than one case followed."

We have had three different opinions expressed as to the seat of the origin of the neuralgia in these cases of zoster frontalis—Bowman considering examples of this disease to be mainly of peripheral origin and extent; Hutchinson thinking them to be in the majority of instances central, yet considering those few of extremely limited area most probably peripheral, whereas Anstie regarded every true neuralgia of central origin, and therefore justly objected to surgical interference in any of them.

On the seat of the disease will depend the result of surgical procedure in any of these cases. In those cases of recognized central origin neurotomy or neurectomy is most certainly contraindicated, yet in those cases of essentially peripheric origin and extent—and we believe with Hutchinson that there are such—they would seem to be as essentially desirable.

Unfortunately we have no accurate means of differentiating between the two kinds of cases.

Those instances of zoster frontalis occurring in the aged, especially with a previously neurotic history, and again associated with secondary motor paralysis, are

almost certainly of centric origin. Those cases also of severe disease, involving a large area—not only all the branches of the ophthalmic, but also implicating the second or even all three divisions of the fifth nerve—are most probably of central origin.

Whereas those cases occurring in the first half of life, in previously non-neuralgic patients, with a recent history of exposure to cold, damp wind, and with a continuous pain, together with disease of limited extent, involving, may be, only a few terminal filaments of one or more branches of any one or more divisions of the fifth, will most probably prove to be instances of peripheral origin and extent.

Further than these indications we cannot go at present.

Seeing, however, that it is conceded by our three authorities, and an accepted fact of our day, that subcutaneous section of superficial sensory nerves is a riskless and simple procedure, and painless under anæsthesia; therefore, in those instances where we have any doubts as to the character of the case, a division of one of the nerve-branches would seem to be indicated as a test of the seat and extent of the disease. This having been done, and the patient again conscious, if the pain has now ceased in the region of distribution of the divided nerve-branch, and palpation over the same area does not cause its return in that or other districts, we may justly consider the case to be one of peripheral extent and origin, and after again anæsthetizing our patient, proceed, as far as the same is possible, to exsect a portion of each of the affected nerve-branches.

In those cases where the pain persists after our experimental division of the nerve it would seem wiser to desist from further operative procedure, and treat the patient according to the best methods suggested to the mind of the physician in charge.

Limited by our study, therefore, we believe that exsection in the properly selected cases offers the most rapid and permanent relief from the persistent neuralgia of zoster frontalis, and that in the hands of the educated clinician—not loaded down with the heavy weight of the uncertain pathology of these cases—it is likely to gain a permanent and worthy stand.

The treatment of the eye complication is as yet untouched, and calls for a few remarks. Hutchinson, as far as I can find, does not refer to ocular treatment, and Bowman's remarks are unsatisfactory.

Whether on account of vaso-motor paralysis through palsy of the sympathetic, or on account of certain fibres of the trigeminus being active ones of secretion, we know not, yet we believe that the characteristic quality of the eye complication of zoster frontalis or trigeminal neuralgia is one of serous inflammation of the affected tissues, resulting in a variable increase—according to the grade of the inflammation—of the intra-ocular fluids. The same increase may be only of slight amount and temporary, causing no organic harm. In those instances of severe disease there appears to be a tendency to implication of the deeper tissues of the ball, resulting in such an increase in the intra-ocular fluids that the same are formed more quickly than removed; hence we have a steadily increasing intra-ocular tension resulting, if not relieved, in glaucoma in a few instances, and a more or less complete destruction of the organ by the same, or by secondary trophic changes, the sequelæ of the inflammation.

Appreciating the danger, can we not anticipate the same by proper prophylactic treatment in those cases seen previous to the onset of the ocular complication? Again, in those cases where the eye-inflammation has already commenced when first seen, can we not limit the extension of the same so that the deeper tissues of the eyeball may escape and the eye be saved? Yet again, in those cases where the glaucomatous condition is already present, can we stay the progress of the same with the hope of having a maimed, instead of a completely destroyed, eye.

A remedy, in order to achieve the desired results, must be one that will reduce the calibre of the paralyzed ocular vessels and thus limit the production of the intra-ocular fluids; again, if possible, it must unlock the outlet so that the excess of fluid may escape from the eye. To be of prophylactic use it must prevent the vascular dilatation and keep the drain open.

In eserine we find the remedy that, *par excellence*, achieves the above results. This remedy may already have been recommended in these cases, but if so it is unknown to the writer.

As a prophylactic its occasional use, in the form of ointment, is advisable; after the keratitis is present it will need to be used more frequently, together with the general treatment for the same; in cases of keratoiritis, or iritis, it may still be used, but on account of its irritant effects the result must be watched. If the intra-ocular tension becomes plus normal and the iritis and ciliary neuralgia are increased by its use; again, in those cases where, together with an active iritis, we have extension of the inflammation to the deeper tissues of the uveal tract with increasing tension under its use, we must withdraw the remedy and either resort to paracentesis of the cornea, or, if the integrity of the eye is endangered, iridectomy may be considered advisable.

Yet in the majority of instances we anticipate that eserine—especially as a prophylactic and in the very earliest stages of the ocular inflammation—will be found an unmixed good. In our own case it has been used without the slightest irritant effects, and the neuralgia of the eyeball has ceased entirely, the sclerotic is paler and more opaque, the tension is lowering, the cornea and media becoming clearer, his vision showing signs of improvement, the fundus seen more clearly, and the vision of the fellow-eye has risen in eleven days from $\frac{20}{XXX}$ to normal.

In the hydrochlorate of cocaine we have the most powerful local anæsthetic and vessel contractor, and its slight mydriatic action, together with its slight paresis of accommodation effect, may not be especially injurious in these cases. In those cases where eserine's irritating action is pronounced, in the cases of iritis, or in those cases of deep inflammation, it would seem that the hydrochlorate might be used before resorting to operative procedures. Its effects, as thus far investigated, are very transient, and we know not as yet whether its frequent application—as would be needed in these cases—can be fearlessly pursued. In a few cases recorded it would seem that occasionally its effects are not entirely intra-orbital, for, besides the local action, marked pallor of the skin, together with beady perspiration and threatened and actual syncope, has been observed. If due to the drug, probably an anæmiating effect is produced on the nervous centres, though Dr. J. L. Minor[1] attributes these symptoms to the conscious fear of the patient when an operation is going to be performed, and the latter is undoubtedly a facile explanation.

Is atropine a remedy suitable for this form of eye-inflammation? "According to the most recent and reliable tonometrical investigations, atropine diminishes the intra-vascular tension by paralyzing the muscular coat of the vessels, but the general intra-ocular tension in the vitreous is increased by its use" (Bull).

Any remedy producing such results, in our opinion, ought to be entirely avoided in the eye complication of trigeminal neuralgia, lest we precipitate the result that we endeavor to avoid, viz., glaucoma, by not only increasing the intra-ocular fluid, but also by damming up the iritic angle and Fontana's space, and thus blocking the drainage system of the eye.

My own patient states that atropine was used twice daily, in the early stage of his eye disease, for one week. During the latter two days of this time the suffering following its application, together with the marked reduction of vision, caused the surgeon to interdict its further

[1] See MEDICAL RECORD, February 7, 1885, pp. 141-148.

use. After its effect passed off, he says the eye became comfortable and the increased cloudiness disappeared. If used at all, it should be only for diagnostic purposes, and only by those skilled in ophthalmic practice.

Before closing this unexpectedly prolonged study, and as an apology for the same, a word about the frequency of herpes frontalis may be added. Hutchinson says: "The disease is, I am persuaded, more frequent than is generally supposed. In proof of this I may mention that, during the last year, no fewer than three patients have consulted me in private on account of its effects." Again, he says: "I have found most surgeons very incredulous as to this disease, and free in their assertions that they had never seen it, and that it must be extremely rare. My conviction is that it is misnamed."

Again, the impulse of which this study is the result was created by the fact that my own patient had gone unrecognized[1] for nearly five months, and had been seen by four different practitioners. The first recognized the herpetic eruption, knew it was not erysipelas, yet asked the patient if he had ever had syphilis; the second recorded "herpetic condition of the lid;" the other two—both specialists—recognized the iritis; but all overlooked the trigeminal neuralgia.

Conclusions.—From the foregoing study it would seem that the phenomena of herpes zoster frontalis are dependent upon, and the result of, the neuralgic disease of the ophthalmic division of the fifth cranial nerve; that the essential condition is one of asthenia of the nervous tissues involved; that there is no definite or constant anatomical change in the affected nerves; that in the great majority of instances the disease is of central origin, but that in a few cases it appears to be of peripheral origin and extent; that the associated cutaneous and ocular inflammations are secondary to the neuralgic disease, and appear subsequently to the onset of the same; that these dependent inflammations are due to vaso-motor paralysis on account of palsy of the sympathetic, or due to the influence of a special set of trophic fibres embodied in the trigeminus; that the extent and severity of the inflammations are in direct relation to the severity, extent, and persistence of the neuralgia; thus we may have any degree of increased vascularity or inflammation—from simple hyperæmia to complete destruction of tissue.

The essential treatment of the disease is that of the neuralgic state; that in the instances of central origin local surgical interference is contra-indicated, but in the fewer cases of peripheral origin and limited extent, excision of the affected nerve-branches is advisable; that the ocular inflammation is serous in character, with a special tendency to increased intra-ocular tension and the glaucomatous state; that on this account eserine would appear to be the remedy *par excellence*.

The disease, though almost invariably occurring but once in a lifetime, and also, almost invariably, accurately limited by the median line of the body, may, in very rare and exceptional instances, not only transgress for a short distance the median line, but also occur more than once in the same individual.

That it is a disease occurring with greatest frequency and most severity in the latter half of life; that it is a disease important, not only on account of the destructive ocular inflammation, the severe and often prolonged suffering, but also on account of the risk to the life of the aged patient; that it occurs more frequently than is generally supposed; that it is often misnamed, and hence overlooked.

16 Laflin Street, Chicago.

The French Plan of giving Castor-oil to children is to pour the oil into a pan over a moderate fire, break an egg into it, and stir up. When done, flavor with a little salt.—*Archives of Pediatrics.*

[1] On this account, and to make my own record more reliable, I showed the case to Professor J. N. Hyde, and he was pleased to exhibit the patient to the class of Rush Medical College, indorsing fully my diagnosis in his remarks.

Clinical Department.

ANTIPYRIN AS AN ANALGESIC IN HEADACHE.

Dr. John Blake White, Physician to Charity Hospital, New York, sends us the following:

"The high road to truth is the knowledge of facts, and well is it for searchers after truth when facts can be ascertained and carefully recorded.

"Symptoms are the alphabet, cases the language, of disease, and that physician subserves his profession who carefully records his experience.

"During the past two years I have abundantly tested the therapeutic value of the drug known as antipyrin in various forms of headache. The prompt relief obtained through its use compels me to accord to it a high rank among our medical resources. I have already called attention (*Medical News*, July 10, 1886) to the potent antipyretic power possessed by this remedy in the management of various forms of fever, and have observed that after its administration the urgent symptom of headache, so uniformly present in these cases, was soon controlled.

"Antipyrin undoubtedly possesses bradycrote properties in a high degree, as the pulse is notably softened and moderated in frequency soon after a proper dose of it has been taken. It produces some somatic change favorable to a reduction of the pulse in cases of fever, and so exerts a calming influence upon the vaso-motor system. The capillaries, through its agency, doubtless dilate, and local congestions are dissipated, as the relieved patient usually sinks into a refreshing repose soon after its exhibition. In the course of large experience with antipyrin I have found that, when administered in masterful doses, it not only promptly relieves the symptom of headache whenever present, whether resulting from disordered digestion, disturbance of the menstrual functions, loss of sleep, undue mental effort, or even that associated with dreaded uræmia, but also possesses reliable prophylactic virtues against recurrent attacks of cranial neuralgia. So confident am I of the power of this remedy to disappoint neuralgic headache when imminent, that I have instructed many patients, who are liable to such visitations, to keep in readiness and take a dose of antipyrin as soon as they have premonition of its recurrence, and all so far testify in favor of its efficacy.

"The value of this remedy in the above respect has not only been tested in my hospital and private practice, but I also record the fact that it has proved successful in the hands of professional friends, upon whom I had urged its employment for the relief of neuralgic affections of the head and face. I have been singularly impressed with the promptness of relief which often followed the administration of even a single dose of fifteen grains of the antipyrin. The grateful relief from headache usually ensues within half an hour after the drug is taken. A sense of drowsiness ordinarily supervenes, followed by a brief but sufficient slumber, and the patient awakens quite relieved of this distressing symptom. I have never yet seen the sleep-disposing properties of antipyrin alluded to by any other observer, although this effect seldom fails to ensue when a full dose such as I have named has been taken."

The newly formed State Board of Health of Massachusetts has been organized by the appointment of the following members by the Governor: Dr. H. P. Walcott, of Cambridge, chairman; Dr. F. W. Draper, of Boston, medical examiner; Dr. E. A. Jones, of Taunton, homœopathist; Julius H. Appleton, of Springfield, manufacturer; Thornton K. Lathrop, of Beverly, lawyer; Hiram F. Mills, of Lawrence, civil engineer; James White, of Boston, retired merchant.

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ANOTHER NEW ANTIPYRETIC-ANTIFEBRIN.

IT would seem as though there were already a sufficient number of antifebrile remedies to satisfy the most enthusiastic therapeutist, but the list is being added to almost daily, and the clinical mine shows as yet no signs of threatened exhaustion.

The latest discovery in this direction is announced by Drs. Cahn and Hepp, of Strassburg, in the *Centralblatt für klinische Medicin* of August 14, 1886. The substance is known chemically as an acetanilid or phenyl-acetamid, the formula for which is $C_6H_5NHC_2H_3O_1$, but the writers have given it the more convenient name of antifebrin. It is a clean, white, crystalline, odorless powder, imparting a slight burning taste when placed on the tongue. It is almost insoluble in cold water, dissolves with difficulty in hot water, but freely in alcohol and alcoholic liquids, such as wine. It melts at 235.5° F., and sublimes unchanged at 557.5° F. It possesses neither acid nor basic properties, and is very rebellious to the action of most reagents.

The authors have experimented with the remedy in a number of febrile troubles—among others typhoid fever, erysipelas, acute articular rheumatism, pulmonary phthisis, and septicæmia—and state that the results obtained were very satisfactory. It is given in doses of from four to fifteen grains, shaken up in water, dissolved in wine, or enclosed in wafers. A maximum dose of thirty grains per diem was not exceeded. In general terms it may be stated that it is of about four times the strength of antipyrin. The effect of the drug upon the temperature is noticed at the end of about an hour, and attains its maximum usually in about four hours, passing off again, according to the size of the dose, in from three to ten hours. The action of antifebrin manifests itself externally by a reddening of the surface and moderate perspiration. The patients sometimes complain of a cold feeling, though there was never any decided chill noticed. The pulse-rate falls proportionately to the temperature. There was never any nausea caused by even large doses.

In conclusion, Drs. Cahn and Hepp speak enthusiastically of the marked antipyretic properties of the new drug, and of the absence of any untoward symptoms attributable to it. It has also, they claim, the advantage of cheapness, being obtainable for the moderate price of about twenty-five cents an ounce at wholesale.

PHYSICIANS AND INSURANCE CERTIFICATES.

SOME days ago the daily papers noticed an instance where a physician was accused of assigning a wrong cause of death on an insurance certificate, for the purpose of collecting the amount of the policy for the benefit of the patient's friends. The accused person was able to completely exonerate himself from the charge. The fact, however, of such circumstances having arisen, calls attention to the methods of business pursued by some life-insurance companies, which are worthy of severe condemnation. These methods are embarrassing to the physician, but of especial unfairness to the insured.

We do not refer to the large companies with their enormous legitimate business, where the risk of each individual case is carefully considered before any policy is written, and where the relation between present age and chances of long life are computed from carefully prepared tables of vital statistics. The laws of insurance are compact, and the companies manifest no desire to evade any of their responsibilities; but we have reference to some of the smaller industrial insurance organizations. Their policy seems to be to take any risk, however great—that is, they get all the premiums they possibly can; then, if, at the time of death of the insured, they can prove that he or she had any chronic disease, they try to evade the full payment of the policy.

Among many of the poorer classes the small amount of their insurance means a great deal. Their wages and the cost of living allow of no savings. The policy practically represents a burial fund. About this, least of all, should there be any haggling by the companies, or any delay in its prompt payment. A physician may be called in to see a patient in the last stage of phthisis. The patient dies, and the medical attendant is called upon to certify whether the patient was afflicted with any chronic disease. If he is honest, he must answer yes, though he knows that this will result in a partial or entire forfeiture of the amount of the policy. If the company was not willing to pay the whole amount in case of death from any cause, it should not have taken the risk. The persons thus exposed to injustice are those whose lack of means prevents them from resorting to legal redress. The agents of some of these companies are irresponsible persons, whose business methods are hardly to be commended. In this great city there is a large enough field for legitimate business, even among industrial organizations. There is no need of their taking extra-hazardous risks. Still less is there justification for their receiving premiums and then refusing to fulfil their part of the contract.

THE EXCRETION OF DRUGS BY THE MAMMARY GLANDS.

A GOOD many observations have been made upon the subject of the medicines excreted by the mammary glands. It has been claimed that mercury, iodine, bromine, arsenic, strychnine, chloroform, sulphur, and chloral may be thrown off by this gland when taken into the stomach of the nursing woman. It cannot be said, however, that our knowledge of the subject is as complete and definite as it should be, and hence the recent experiments by Fehling are of interest. Fehling observed the effects on nurslings of various drugs given to the

nursing mothers. According to the Paris correspondent of the *British Medical Journal*, when doses varying from two to three grammes of salicylate of soda were administered to the nurse, every time that a child was suckled within an hour after the administration of the dose the salicylate appeared in its urine. After an interval of twenty-four hours there remained no trace of the drug. When the child was suckled too soon after the medicine had been taken, the salicylate could not be found in its urine. Elimination was completed at the same time in the mother and the child. With iodide of potassium the results were the same. The milk, when analyzed, gave the characteristic reaction. In the infant, elimination lasted seventy-two hours, in the mother forty-four. After twenty-four hours the milk still contained iodide of potassium. With ferrocyanide of potassium reaction was very pronounced in the maternal urine, but absent in the child's. Prolonged applications of iodoform upon vaginal and vulvar wounds of women in parturition, after prolonged use, generally resulted in iodine being found in the milk and urine of the mother, but not always in the urine of the infant. The child was never indisposed, even when iodoform was used to dry up the umbilical cord. There was only a small quantity of mercury transmitted through the milk of a nursing mother, and its presence was not constant. It appeared that the food of wet nurses—even acid fruit-juices and vinegar—had no influence on their nurslings. Thornhill had stated that he observed prolonged sleep occur to children after administering to their wet-nurse such narcotics as tincture of opium in doses of from twenty to twenty-five drops. Fehling observed neither prolonged sleep nor constipation in the children. Hydrochlorate of morphine or chloral, in tolerably strong doses, did not affect the sucklings. Subcutaneous injections of moderately strong solutions of sulphate of atropine produced very pronounced symptoms in the mother, and dilatation of the pupil in the infant, which disappeared in twenty-four hours. This substance should, therefore, be employed in very feeble doses. In a very great majority of cases the milk of a woman attacked with fever had no influence upon the nursling. In those rare cases when the temperature reaches 104°, the variations in the child's temperature were identical with those of the mother. In some instances children had died of intestinal catarrh where the mother's milk could be the only cause of the affection. Bumm has observed, in a case of inflamed breast, the passage of the micrococcus from the milk into the digestive apparatus of the child.

CHARLESTON PHYSICIANS IN GREAT NEED.

In the telegraphed reports of the calamity which has visisted Charleston much is said of the general distress which prevails, and instances of individual suffering are related, but we do not remember to have seen any mention of the trials of the physicians. As is usual at such times, they have been silently going about doing good and administering to the needs of others, while themselves homeless and ruined. Yet the wants of the business classes and of the laborers and others are telegraphed abroad, and appeals for help for them are made, while the physician, too busy in his work of mercy to think of himself, is suffering and toiling without one word of recognition or even thanks.

We are permitted to present the following extract from a private letter from one of Charleston's best known physicians to a medical gentleman in this city:

"We are distressed," he writes, "almost beyond endurance. Our women and children are our sources of anxious solicitude. May God protect them in the open field, tenting in the night air! My entire family—wife and four children, the oldest eleven years of age—are out of house and home, like hundreds of other sufferers." . . .

We think little more need be said to show the necessity of speedy aid for the sufferers among our own brethren in Charleston. There are no doubt many cases of individual want among medical men and their families, for while their services are in demand, and they are busied in attending to those suffering from injuries and the results of exposure, yet they are seldom paid, at least in cash. Their families are homeless and must be provided for, but food and shelter are not to be obtained without ready money in such times, and ready money the physician but rarely obtains.

We therefore appeal to our readers throughout the country to help their brethren in South Carolina in this their hour of need. We are accustomed, by our very calling, to help others when in distress, and let it not be said that we are indifferent to the sufferings of those in our own ranks. Now is the time to help them, and he who gives quickly gives twice. THE MEDICAL RECORD will gladly receive subscriptions for this object, and will forward the amounts so received at once by telegraph. Acknowledgments will be published in our next issue.

News of the Week.

A FRENCH VERDICT.—A coroner's inquest was held a short time ago on the body of a woman who, it appeared, had been suffering from heart disease, and this bringing on a fit of despondency she had taken a dose of Paris green. The coroner's jury found that the woman had died of "heart disease accelerated by partaking of a dose of Paris green."

DEATH FOLLOWING AN APPLICATION OF COLLODION.—A death is reported in France from the application of collodion to the face of a woman suffering from small-pox. The design of the application was to prevent pitting. Suppuration took place under the mask of collodion, and the patient died after great suffering. As the small-pox was discrete and uncomplicated, and the autopsy showed no visceral lesions, the fatal termination would seem to have been due to the injury resulting from the collodion.

DEATH FROM ETHER.—Mrs. Mary S. Wesselhoeft, forty years of age, said to have been the wife of an American physician, was found dead in her bed in London on August 5th. According to the evidence of her husband, given at the inquest, it appeared that the deceased had suffered from asthma, for the relief of which she was supplied with ether. A pint bottle, two-thirds full of the drug, was found by the bedside, and the atmosphere of the room was charged with the vapor of ether. The jury returned a verdict in accordance with the medical evidence,

and expressed the opinion that it was unwise to have allowed the deceased to have so much ether at her command.

HOSPITAL SATURDAY IN ENGLAND.—At the board meeting of the Hospital Saturday Fund, held on August 7th, it was reported that, notwithstanding the unfavorable state of the weather, the Hospital Saturday street collection had realized £4,000; being £500 less than the amount obtained last year.

HONORARY DEGREES FROM HEIDELBERG.—Upon the occasion of the recent celebration of the five hundredth anniversary of the University of Heidelberg, the honorary degree of Doctor of Medicine was conferred upon Graham Bell, of Washington; Professor Chevreul, of Paris; Baron Nordenskjöld, of Stockholm; Sir William Thompson, of Glasgow; Professor Roscoe, of Manchester, and others. Professor Koch, of Berlin, was created Doctor of Philosophy.

PROFESSOR VON LANGENBECK has been suffering for some time from failing vision due to a cataract. He recently submitted to an operation for its removal at the hands of Dr. Pagenstecher, of Wiesbaden. The operation was entirely successful. Many friends, including the Emperor and Empress of Germany, have sent telegrams of congratulation to the eminent surgeon.

"WHO WILL BE THE FIRST TO TACKLE A WEN?" The question is answered by the following, clipped from a recent issue of the *Buffalo Express*: "Yesterday afternoon, Dr. —— performed a skilful operation in the removal of a large *follicular tumor*, several ounces in weight, from *the head* of Mrs. L ——, of this city, who has for many years suffered great pain from its continued growth and pressure under the scalp." What next?

A CASE of yellow fever from the steamer Alvo, of the Atlas Line, found its way into St. Vincent's Hospital on Saturday last. The disease was duly diagnosticated, and the patient transferred to the Reception Hospital, where he died.

THE DEATH OF DR. THEODOR JURIÉ is announced from Vienna. He was born in October, 1809, and began the practice of medicine in 1834. He celebrated his jubilee two years ago, upon which occasion, among other honors, the Emperor of Austria conferred upon him the title of nobility, creating him Edler von Lavandal. His death was caused by embolism of the cerebral arteries. He left two sons, both practising physicians in Vienna.

ANOTHER SUCCESSFUL CASE OF LAPAROTOMY FOR INTESTINAL WOUNDS.—It is stated in *Daniels' Texas Medical Journal* that Dr. Bacon Saunders, of Bonham, Tex., has operated twice for wounds of the intestines, and once with success. These cases have never been recorded, but a report of the operations is promised by Dr. Saunders.

THE RELATION OF HEIGHT TO WEIGHT.—According to Dr. Broca, the well-known French anthropologist, the human body should weigh as many kilogrammes as it measures in centimetres, after deduction of the first metre. Thus a man measuring one metre eighty centimetres (six feet), should weigh eighty kilos (176 pounds). Should his weight be more or less, he is too stout or too thin.

DEATH FOLLOWING AN INTRA-UTERINE INJECTION.—Dr. Otto Engström reports in the *Finska Läkaresällskapets Handlingar*, Nos. 5 and 6, vol. 27, the case of a woman, thirty-seven years of age, who was suffering from fungous endometritis. The mucous membrane of the uterus was curetted and then an injection was made of a solution of iodine, one part to thirty of water. After the second injection, which was made with a stronger solution (1 to 10), the patient had a chill which was followed by symptoms of peritonitis, and death occurred three days later. There was no evidence at the autopsy of any fluid having passed through the Fallopian tubes, and the writer believed that the inflammation of the peritoneum arose by extension from the uterine substance.

Obituary.

THOMAS ALEXANDER McBRIDE, M.D.,

NEW YORK.

THE many friends of Dr. McBride were shocked to hear of his untimely death, which occurred at sea on Tuesday, August 31st. During the past year, although he kept actively at work, he was far from being a well man. The symptoms of Bright's disease, from which he had been suffering for a considerable period, became more pronounced, and he was forced to go abroad for rest and treatment. He spent the greater part of the summer at Carlsbad, with the result of a temporary improvement; but after reaching Southampton on his return homeward he was seized with uræmic coma, and died on the second day of the voyage. His body was committed to the deep with appropriate funeral ceremonies, the Rev. Dr. Buell, of St. Luke's Church, New York, officiating.

He was born in Sandusky, O., in 1844, and was at the time of his death forty-two years of age. After completing his early education in his native State, he matriculated in the College of Physicians and Surgeons of New York, and graduated in medicine in 1871, immediately thereafter entering Bellevue Hospital and serving his interneship in the medical division. He then commenced practice in New York, where he rapidly gained an enviable reputation for studious research, for accuracy in diagnosis, and skill in therapeutical resources. Devoting himself to renal and nervous disorders, he soon rose to a high rank as a consulting physician in these branches. With a peculiar aptitude for applying the results of recent discoveries to practice, he was considered to be one of the most accomplished practitioners of the day.

Notwithstanding the demands of a large business, he found time to keep abreast of all the advances in his department, and by his numerous and well-digested medical papers to add the results of his personal observations, oftentimes astonishing his friends with the variety and profundity of his knowledge of the most abstruse questions in our science. Many of these papers he contributed to the *American Journal of Neurology and Psychiatry*, of which he was for a long time the editor-in-chief. He was for several years attending physician to Bellevue Hospital, and at the time of his death attending physician to the Presbyterian Hospital, lecturer on clinical medicine at the College of Physicians and Surgeons, and member of the following: The Medical Society of the County of New York, the New York Academy of Medicine, the Laryngological, Neurological, and Practitioners Societies; also of the University and New York Yacht Clubs.

Of a genial temperament and generous spirit, he endeared himself to a large circle of friends, in whose memories will linger the recollections of a lovable and well-spent life.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

MEETINGS OF SECTIONS.

(Continued from page 274.)

SECTION IN OBSTETRICS AND GYNECOLOGY.

WEDNESDAY, AUGUST 11TH—SECOND DAY.

PRESIDENTIAL ADDRESS.

DR. MEADOWS (President of the Section) took the chair at 2 P.M., and delivered an address. In his opening remarks Dr. Meadows drew the attention of his audience to the wide separation that was steadily taking place between gynecology and obstetrics. It was true that in the minds of some the two departments were still indissolubly linked, but the divorce had really taken place, and with the rapid development taking place in our knowledge of these arts, the gap must become more and more marked. The enormous advances made in gynecology had riveted the attention of the medical world on the practitioners of this branch of medicine; the marvels of ovariotomy and the great strides made in other departments of abdominal surgery were among the greatest triumphs of skill the world has ever seen. In no other department of medicine had so much been done to save human life and successfully alleviate human suffering. Referring to the discussion that was to take place on the "Alternatives to Craniotomy," Dr. Meadows condemned the latter operation in the severest terms, and trusted the day was not far distant when destruction of infant life by the perforator would be a thing of the past. No words could be too strong when used against an operation the practice of which was opposed to every sentiment of religion or morality. The operation had been held in check in former times by the religious feeling of the age, and the same voice still condemned so coarse and barbarous a proceeding. It was to be hoped that in the time to come living children would always be secured by the operation of Porro or by Cæsarean section. To the gynecologist will be due the credit of saving infantile life, and in this respect he stands far in advance of the obstetrician. The facility with which craniotomy can be done will always be a temptation to use it instead of resorting to the Cæsarean section or to Porro's operation, and unless a feeling of deep moral responsibility is uppermost in the practitioner's mind the obstetric art will be still disgraced by the frequency with which embryotomy is practised. Speaking of the papers that were promised on the subject of "Removal of the Uterine Appendages," the President entered his protest against such a misapplication of terms; the uterus and the Fallopian tubes ought to be spoken of as the appendages of the ovaries, and not *vice versâ*. The removal of the uterine appendages was an operation which was rapidly rising into importance, and must occupy the thoughts of every serious mind; it was much to be regretted that so much angry feeling had been imported into this matter, but it must be remembered that great advances were always attended with great opposition. Perhaps, if the Section could imagine some operation suddenly brought forward to deprive the male sex, in a similar way, of the testicles, an idea could be obtained of what an outcry would certainly be raised; as it was, placed outside the pale, the superior sex could look on unprejudiced and weigh the matter calmly. Dr. Meadows held that removal of the uterine appendages was a most useful operation, and commended its employment in certain cases of neurotic disease, in cases of uterine fibromata, and also in extreme instances of pelvic distortion, where the birth of a living child was impossible. In these latter cases removal of the uterine appendages was preferable to Porro's operation, the induction of premature delivery, etc. A word of warning needed to be uttered against the over-frequent employment of the operation; there was a risk of abuse in this direction, and nothing was more calculated to damage its utility and good name. As long as our present skill in diagnosing the exact condition of the organs within the pelvis was so imperfect, hindrances would always exist in judging the correct indications for the operation; in all cases the importance of a careful course of medical treatment must be weighed before radical measures were adopted with the knife, and the physician's skill must be exhausted before the appendages are removed. Brief reference was made to the other papers promised, especially those by Dr. Lusk and Dr. Emmet, and a hope expressed that many points would be brought out in the discussion following. In conclusion, Dr. Meadows, after referring once more with pride to the advances made, dwelt for a short time on what might be called the dark spots in gynecology, and trusted light might soon be thrown even on these. It was most desirable that we should possess an exact knowledge of the effects of drugs on the various pelvic organs; a great step would have been made when we ascertained the action of one or two drugs on each of these structures; if the action of even one remedy was clearly defined at this meeting, the labors of the Section would not have been in vain.

DR. ROBERT BARNES read a paper on

THE ALTERNATIVES TO CRANIOTOMY.

The author at the outset laid it down as a rule that the nearer we attain to the abolition of craniotomy the nearer do we attain to perfection. After drawing attention to a memoir which had been written by Dr. Tyler Smith in condemnation of the operation, it was pointed out that craniotomy was almost always performed for some condition of pelvic distortion, and as the latter was to a great extent a preventable disease, we could hope for considerable assistance in the abolition of the operation from measures which improved the sanitary surroundings of our young girls. Here was a domain in which medicine and hygiene had their scope. As a matter of fact, the passing of the Factory Act, which limited the age at which young girls could be employed in the workshop, had done much to lessen the frequency of pelvic distortion. The testimony of medical men in our large manufacturing towns showed that pelvic deformations were much less common than they were fifty years ago; while in countries such as Germany, where no such safeguards were adopted, the museums were full of specimens of distorted pelves, and craniotomy was of frequent occurrence. Craniotomy had been done in two classes of cases: (1) those in which the head was delayed above the brim, and in which the perforator was justly used; and (2) cases in which the head was delayed in the pelvic cavity, and in which forceps ought to be employed. In the first class there could be no question that premature labor ought to be induced; even if the head was then large, the vertex was very plastic and could be readily moulded; or, in more extreme cases, turning could be practised. When once a fœtus was known to be dead, it was not necessary to seek any alternative to craniotomy. If the pelvis was known to be impassable, should abortion be done at an early month, or should the woman be allowed to go full time with the prospect of Cæsarean section? The former seemed preferable. If the child has gone full time, then some alternative must be sought. In considering embryotomy, it must be borne in mind that the instruments for the operation had been greatly improved. The advantages of Porro's operation was that the child was saved, and

the mother, too, probably; in the Cæsarean section the mother is liable to be exposed to the same danger again and again; if craniotomy is tried and fails, the result of Porro's operation or Cæsarean section is rendered less hopeful. In contracted pelves, where the diameter is three and a half to three inches, the mortality after craniotomy ought to be no greater than in normal delivery; here Cæsarean section or Porro's operation are not indicated, nor are they justifiable. Religion and sentiment had both exercised an influence on the performance of embryotomy, but the subject should be weighed quite apart from these factors, and the teaching of science alone be regarded. One question we had to consider was this: "Is Cæsarean section, even with its modern improvement, as good and safe for the mother as embryotomy?" In the case of Porro's operation there would always be the existence of shock to the mother, due to the strangling of the neck of the uterus by the serre-nœud; this must always be a serious matter for consideration. In the hands of men skilled in abdominal surgery Dr. Barnes felt sure both Cæsarean section and Porro's operation would give brilliant results; but the case of the general practitioner had to be considered, and was there not a great risk of a vastly increased mortality if the latter, with only a few and distant opportunities for operating, was to substitute abdominal section, as a rule, for the easier operation of craniotomy. Cases often occurred in which moderate degrees of contracted pelvis was not diagnosed till the first labor; in such instances it was justifiable to perform embryotomy, since in succeeding pregnancies living children could be born by the induction of premature labor, and thus lives saved. In extreme cases of pelvic distortion, where the opportunity for the induction of labor had been passed by, Porro's operation ought to be done. In pelves with a diameter of three and a half to three and a quarter inches craniotomy was indicated; in cases complicated by tumor, in ruptures of the uterus, and disease of the latter organ, Porro's operation was called for; in atresia of the cervix Cæsarean section might be needed; in convulsions or in hemorrhage labor should be brought on and craniotomy avoided. In conclusion, the writer remarked that the best alternative to embryotomy lay in the production of a perfectly healthy and virtuous female population.

Dr. Kinkead, of Galway, read a paper on

CRANIOTOMY AND CÆSAREAN SECTION.

He admitted that under certain favorable conditions Porro's operation was desirable, but was inclined to give the preference to Cæsarean section. The causes of death after the latter proceeding were—1, shock and exhaustion; 2, peritonitis; 3, incarceration of intestine; and 4, hemorrhage. Craniotomy with a pelvis of only one and a half inch in diameter was to be condemned; it often had to be followed by Cæsarean section or Porro's operation. As regards the occurrence of shock, there was no greater risk in this respect after Cæsarean section than there was after craniotomy. Hemorrhage during the former operation could always be restrained by compression of the cervix, either with the fingers or by an elastic band; in late hemorrhage this method was of course not available. Careful and close suture of the edges of the uterine incision was the only real safeguard against late bleeding. The employment of a mere continued suture had been shown to be useless; the right way was to make peritoneal flaps and treat the incision by Sainger's method. Dr. Kinkead approved of the use of carbolized gut for sutures. Great stress must be laid on the careful sponging out of the peritoneal cavity after the operation; the toilet of the peritoneum required to be made as carefully as after the performance of ovariotomy, if success was to be assured. Cæsarean section ought to be as safe for the mother as craniotomy. The performance of craniotomy through a conjugate diameter of two and a half inches was dangerous and hard, while Cæsarean section presented no difficulties to any man.

Dr. W. T. Lusk, of New York, remarked that as in England, so in America, cases of extreme pelvic distortion were rare. Below a three-inch diameter craniotomy was always a serious operation, and, looking back to his own experience, he often felt regret at the thought of some cases he had done embryotomy on in the earlier years of his practice. Certainly the result of his observation was to make him hope that before long craniotomy would be abolished. Men had spoken of the bad success attendant on Cæsarean section, and referred to the almost constant failures at the large lying-in hospitals of Vienna and elsewhere; but in making such quotations we must remember what a mortality normal labors had formerly at these centres, and then we should cease to wonder at the failure of the Cæsarean section. Moreover, looking over the statistics of Michaelis, for example, we found that many cases were operated on when in *articulo mortis*, and then recorded as failures due to the operation. Reference was made to cases of Cæsarean section done lately by Leopold, according to Sainger's method, and in these the success had been most encouraging. If the pelvic diameter was under two and a half inches the Cæsarean section gave better results than craniotomy. In his opinion Porro's operation should be reserved for cases in which labor had been prolonged and degenerative changes had taken place in the uterine tissue; in cases where the uterus had undergone marked retraction and the vagina had been dragged up, Dr. Thomas' operation of laparo-elytrotomy was indicated. The latter operation had scarcely had a fair trial; in cases where the general conditions were good it would be found decidedly successful.

Dr. Wilson, of Baltimore, strongly confirmed all that the previous speaker had said, and spoke in strong condemnation of craniotomy.

Dr. Swayne thought embryotomy could never be abolished; in certain cases the operation was perfectly justifiable, though at times turning might be more advantageously employed. Where the conjugate diameter was below three inches he would abolish craniotomy and perform a Porro operation.

Mr. Lawson Tait protested against the idea that Cæsarean section was necessarily a fatal operation. As regards craniotomy, however, there was a political side to the question, and the matter might be regarded from the standpoint of political economy; over-population was one of the great difficulties of the present day, and a certain amount of infant mortality in childbirth was not without its advantages. The question might be viewed from the side of morality, and certainly we had no right to destroy life. Much harm, however, had been done by regarding woman exclusively as a childbearing machine, and against such a view he would energetically protest. In his opinion Porro's operation would give better results than craniotomy, even in the hands of an inexperienced operator.

Dr. Moore Madden considered that craniotomy could not be too strongly condemned. In an experience of twenty years, with large opportunities for obstetric experience, he had never once seen a case in which he could think craniotomy was called for. He wished to press strongly the question, "Are we justified in destroying any life?" The child was in utero through no fault of its own, and its life was as precious as that of the mother; the idea of over-population, as suggested by the last speaker, could not be weighed in the argument for a moment. The operation of craniotomy was a disgrace to us; the best reference to it was given in the dictum of Sir James Simpson, viz.: "Cold steel for the child and mercury for the mother." He looked forward to the time when craniotomy would be a thing of the past.

Dr. Neville could scarcely believe that cases requiring craniotomy or Cæsarean section were so rare as Dr. Madden seemed to suggest. In his opinion Cæsarean

section was the preferable operation; Sainger's modification of the Cæsarean section had given a list of 28 cases with only 7 deaths, and would probably cause an improvement even on these figures.

Dr. Buchanan, of Glasgow, thought that the opinion of a surgeon in matters relating to obstetrics was valueless. Doubtless craniotomy was far too frequently done. It had been said, "Given a case of deformity at the brim—if an obstetrician attends, we see craniotomy; if a midwife, a living child;" and there was some truth in the old adage. Personally he had done craniotomy with success where the pelvic diameter was only one and three-quarters of an inch; but in such cases the patient must be seen early, before the liquor amnii has long escaped. In withdrawing pieces of bone great care was needed lest soft structures should be damaged; very often the fatal results of craniotomy were due to want of care in the above respect. Say what we may, Cæsarean section was a very fatal operation; in Glasgow there had not been a single successful case; he should prefer Porro's operation to Cæsarean section.

Dr. Thompson denounced craniotomy in the severest terms, and expressed strong opinions in favor of Porro's operation and the Cæsarean section; to his mind men had been backward in performing these latter to the extent they deserved.

Dr. James, in an experience of forty years of extensive private practice, had never once seen a case in which craniotomy was indicated. He advocated an early use of the forceps, and had gained great benefit from the practice.

Dr. Edis thought that the subject of preventive midwifery had hardly received the notice it deserved. In every case a preliminary examination ought to be made when we first see our patient, so that time may exist for the induction of premature labor, if pelvic deformity is found to be present. In every case in which craniotomy has once been performed the patient should be solemnly warned of her condition, and the exact condition explained to her. The difficulties in connection with the operation of laparo-elytrotomy were insisted upon, and Dr. Edis expressed the opinion that the large surgical procedures in obstetrics must always rest in the hands of men with special surgical experience and skill.

Dr. Wright spoke earnestly in favor of Porro's operation, and expressed a firm belief in its advantages.

Dr. Robert Barnes, in reply, stated that the progress of Cæsarean section would depend on the progress of surgical skill, and on judgment in the election of cases. In cases where the pelvic diameter was between three and a half and three inches craniotomy would give as good results as normal labor. He cordially approved of Dr. Edis' remarks. It was a matter of regret that in the discussion speakers had not made more distinction between cases of moderate and cases of extreme pelvic distortion; the latter cases ought to be put in a separate catalogue by themselves. In Porro's operation shock due to the strangling of the neck of the womb would always be an important factor, and for that reason Sainger's modified Cæsarean section had a distinct advantage.

Dr. T. A. Emmet, of New York, read a paper on

CERTAIN MOOTED POINTS IN GYNECOLOGY.

In commencing his subject, Dr. Emmet warned his hearers not to lay too much stress on versions and flexions of the uterus as causes of various symptoms arising apparently from the pelvic organs. Dysmenorrhœa, uterine fluxions, and discharges might be only one way in which the uterus obtained relief for itself; the really important point was to weigh the coincidence of pelvic inflammation, peritonic or cellulitic. A pessary was of little use in merely altering the direction of the uterine axis; if it corrected a prolapsus, it was doing real service, but not else. In using a pessary one always had to consider the risk that the instrument might cause dragging on a tissue already inflamed, and increase the latter. One effect of uterine displacement was to cause stretching of the neighboring blood-vessels and tension of the pelvic fascia—conditions which easily led on to inflammation; by lifting up the uterus, and removing the sources of mischief, a pessary did good and helped to restore the circulation to its normal condition. As regards the forms of displacement, it must be noted that retroversion was often congenital, and in itself of no importance. Dysmenorrhœa was never due to uterine flexions, the association was merely accidental; the fault really lay in the nervous system, and not in the obstruction. It must always be remembered that dysmenorrhœa was only a symptom. Dr. Emmet considered that forcible dilatation for dysmenorrhœa was to be condemned as unscientific, for the cervix may be patulous and yet dysmenorrhœa exist; in most cases of painful menstruation pelvic peritonitis was present and existed as a cause. Referring to the effects of fissure of the cervix, the author was convinced that one point had been brought clearly and certainly home to his mind, namely, that epithelioma of the cervix was commonly secondary to, and the direct result of, a previous fissuring of the neck of the womb. Now and then pregnancy might cause the removal of the effects of pelvic peritonitis, but it could not be surely relied on; dilatation, by causing pregnancy to become possible, was sometimes of use in this way. Numerous cases of pelvic peritonitis and troublesome adhesions had been caused by the injudicious use of ergot; with an undilated "os," and the presence of a fibroid in the uterine cavity, ergot only increased the congestion of the pelvis. Hot-water injections into the vagina lessened pelvic congestion, and we possessed no better method of relieving dysmenorrhœa than by the employment of the hot vaginal douche. This latter fact would not be the case if painful menstruation depended, as some suppose, on mechanical obstruction. Endometritis and endocervicitis were rare, except in theory; the real trouble consisted of a surrounding pelvic peritonitis; once this latter was checked, and the circulation thus restored, all uterine discharges would cease. As regards the application of iodine to the interior of the womb, the author stated that he rarely employs this treatment; as a matter of fact he had reached a point in practice in which he seldom introduced an instrument into the uterus—his uterine sound had been broken for eighteen months, and he had never missed it. All that a sound taught might be made out with the fingers. The uterine mucous membrane would so readily absorb all substances presented to it that it was advisable to do all that was possible by way of the vaginal mucous membrane; moreover, the latter had the advantage of presenting a more extensive surface. By giving up applications to the interior of the uterus, and by largely discarding the use of pessaries, Dr. Emmet had increased his success in treatment; the use of glycerine pledgets he always found valuable. Pelvic peritonitis must always be more common than cellulitis; in chronic cases of the latter disease the connective tissue seemed to become absorbed and disappear, till finally the appearances presented were those of pelvic peritonitis.

Dr. Graily Hewitt read a paper entitled

THE EARLY HISTORY AND ETIOLOGY OF UTERINE FLEXIONS AND DISPLACEMENTS.

In opening the discussion, Dr. Hewitt dwelt briefly on the congenital displacements of the uterus; it must be clear that the normal forward inclination of the uterus must favor anterior displacements. The condition of congenital retroflexion was undoubtedly much rarer than the corresponding anterior malformation, yet it did undoubtedly exist; retroflexion was not uncommonly found in virgins—reference to his case-books showed that out of 250 cases 60 occurred in young virgins. Probably an abnormally loose condition of the utero-sacral ligaments was one cause of congenital backward displacements. In considering the pathological production of flexions it

was very important to weigh the state of the uterine tissue; undue softness of the wall of the womb is not infrequently met with, and if associated, as it often is, with abnormal thinness of the muscular parietes, flexibility is increased and the condition of flexion favored. Dr. Emmet's view, that impaired nutrition of the uterus, due to congestion of the pelvic viscera, acted as a cause, was also true, and malnutrition of the uterine muscle was often the first step in the chain of processes which ended in the establishment of a flexion. The changes undergone by the uterus at puberty without doubt exerted a powerful influence on the after-shape of the uterus; this was well illustrated by cases of imperfect development of that organ. Most cases seen in practice were caused by an acquired softness of tissue; the part played by subinvolution was doubtful. In many cases of flexions undue hardness of the uterine tissue existed; this was really secondary to pre-existing softness, and depended on long-standing congestion with overgrowth of connective tissue; it acted perniciously by fixing the flexions, just as plaster-of-Paris sets a mould when it gradually hardens. The action of traumatism was most important as a cause of flexion; lifting, retching, straining, and muscular effort, all tended to produce uterine displacement, and once the uterus has slightly prolapsed the case is likely to go on from bad to worse. Among the examples of acute traumatism must be reckoned blows, falls, jerks, etc.; of course, granted one finds a flexion and there is a history of violence, it does not necessarily result that the two are connected; but when, after a fall or jerk, the next menstrual period is abnormal, and vaginal examination shows the existence of a flexion, it is fair to connect the two. Numerous cases of displacement, due apparently to the various causes enumerated, were given by the author by way of illustration. Once produced there was no difference in the way in which anteflexion and retroflexion became intensified.

In the discussion that followed the reading of the papers by Dr. Emmet and Dr. Graily Hewitt, Dr. Bantoch remarked that he was obliged to entirely disagree with Dr. Emmet. With regard to the pathology of pelvic inflammation he would say nothing, but on the subject of pessaries he must speak strongly. He could not lay too great stress on the value of a well-adjusted pessary. Patients suffering with severe headache, and hardly able to walk, were at once relieved by the application of a well-fitting instrument; the relief given was so immediate that it could not be due to an improved condition of the pelvic circulation. Dr. Emmet had spoken of dysmenorrhœa as a single disease, while really it depended on many causes, *e.g.*, on the state of the ovaries, of the tubes, displacements, etc. Dr. Bantoch considered that division of the cervix alone would cure a mechanical dysmenorrhœa, and cited a case in illustration. Perfect rest might be a substitute for internal remedies applied to the uterine canal, but many patients could not afford to lie up for twelve months.

Dr. Gordon, while agreeing in the main with Dr. Emmet, yet thought that dilatation was occasionally of use, and regarded it as a form of nerve-stretching. The idea that chronic inflammation attacked the uterus was utterly fallacious; there was no such form of disease, and the theory had done immense harm. What really did exist was a *chronic passive congestion*—a process usually secondary to an *acute* but brief attack of inflammation. Pessaries could not be slighted, for they served to maintain the uterus in a favorable condition for processes of repair. There was no need to defer operation in cases of lacerated cervix, for the operation itself did good by depleting the part and relieving congestion.

Dr. A. B. Hirsh has been elected Adjunct Professor of Orthopædic Surgery in the Philadelphia Polyclinic, and also Orthopædic Surgeon to the United Hebrew Charities of Philadelphia.

SECTION IN SURGERY.

Friday, August 13th—Fourth Day.

The President of the Section took the chair at eleven o'clock.

Professor Victor Horsley, M.B., F.R.S., then read a paper on

THE ADVANCES IN THE SURGERY OF THE CENTRAL NERVOUS SYSTEM.

Professor Horsley related the history of several cases in which cerebral operations had been performed. His paper was illustrated by photographs illuminated by the lime-light, and some living patients were shown at its close.

A short discussion on the subject then took place.

Professor Charcot, of Paris, referred to the labors of Fournier and Hughlings Jackson in cerebral localization.

Dr. Hughlings Jackson followed and related some cases he had observed. In one case, under the care of Sir Andrew Clark, at the London Hospital, the patient had ninety-six convulsive attacks in all, every one of which began in the thumb. By experimenting on a monkey it was found that similar convulsions could be caused, and the probable centre affected in man was thus ascertained.

Dr. Royle, of Manchester, also spoke.

Mr. Bruce Clarke then read a paper on

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

He thought Stohrer's battery the best for the purpose. The use of a galvanometer was necessary, for the employment of a given number of cells was no guarantee of the strength of the current, as the latter lessened during the operation. The exact strength of the current and the length of time during which it should be passed were matters for consideration in each individual case. Electricity was often of use in cases of incontinence and stricture, where the former was of long standing, and where the passage of a catheter showed a tender spot to be present in the urethra. In such cases the passage of a metal electrode down the urethra, and the passage of an electric current through it for a few minutes, on reaching the tender spot, often gave relief. The positive pole was applied to the sacrum, and the negative one in the urethra. Mr. Bruce Clarke described a case in which the patient had had six attacks of gonorrhœa, and was suffering from gonorrhœal rheumatism. A bougie electrode (No. 9 English) was passed down the urethra and passed to and fro for six minutes while the current was passed. There was no pain at the time of the operation, but slight pain in the testicles next day. The pain in the knee joints went away, and the patient was soon able to walk. In the treatment of incontinence, from two and a half to five *milliampères* was a sufficient strength of current. The negative pole was placed either on the perineum, or in the bladder, or over the pubes. Mr. Clarke also alluded to electricity as an agent of use in treating cystitis. For its use in the treatment of stricture he referred to a paper read by Dr. Steavenson and himself before the Medico-Chirurgical Society some months ago.

Dr. Steavenson then read a paper on the same subject, in which he discussed more especially

THE TREATMENT OF URETHRAL STRICTURE BY ELECTRICITY.

Electrolysis, he said, did not burn as did the cautery. He supposed that what really occurred was that a series of decompositions and recompositions occurred as the current passed from one to the other pole of the battery. He referred to the recent lectures of Dr. Stone before the Royal College of Physicians. The cathode was safer to employ than the anode for application to places where it was desirable to leave no scar. The electrolytic treatment of stricture possessed several advantages. No

anæsthetic was necessary, and it was a great assistance to the operator for the patient to be conscious. No bleeding need occur. If any did take place it showed either that the current was too strong or that the wrong pole had been used. Antiseptics were not needed, as the process was aseptic. The negative pole set up destruction of tissue similar to that caused by the caustic alkalies, but an absorptive action around the stricture was also started as the capacity of the urethra went on increasing after the operation. In the majority of cases no recontraction occurred. Dr. Steavenson concluded by reiterating that electrolysis was not the same as the galvano-cautery, and did not leave a scar.

Mr. Erichsen said that Mr. Bruce Clarke's cases were different. In using electricity for the treatment of incontinence an action on the nervous centres took place. In using it for cystitis it must not be forgotten that catheterization was practised, and part of the benefit might be due to that. Electrolysis as a remedy for stricture was not altogether new, for he remembered a French gentleman coming to University College Hospital, twenty years ago, and giving a demonstration on the subject. The decomposition of tissue caused by electrolysis was analogous to that set up by the application of potassa fusa. Cases treated by the latter agent, however, frequently did badly ultimately.

Mr. Vincent Jackson, of Wolverhampton, asked as to the after-treatment. Another gentleman asked as to the use of electricity to the external parts of the body.

Mr. Bruce Clarke then replied. He agreed, he said, with Mr. Erichsen, that his cases were very dissimilar, and he could not explain how the same agent (electricity) could do equal good to cases varying so much from one another. He felt they were only upon the threshold of the subject. Electricity might, perhaps, improve the nutrition of the parts to which it was applied. In reply to Mr. Vincent Jackson he said he should shortly publish a series of cases and give full details. He would, however, mention one case. This was that of a patient whose stricture had been incised nine months before he had seen him. Relapse had occurred and the stricture would only just admit a catheter. After six weeks' electric treatment the patient was discharged well, and a No. 11 could be passed. This favorable result was achieved in spite of the perineal fistula re-forming—a result which might, he admitted, be due to the passage of the current. He saw the patient three weeks ago and the improvement was maintained. As to the application of the electrolytic current to external parts of the body, he had used it thus: One case was one of stricture at the meatus, and he watched the process. Another was that of a strumous scar in the neck. In both cases no destruction of epithelium took place, but the tissues seemed simply to melt away after four or five applications. No soreness was caused. In the case of the scar in the neck, a marked diminution in its size rapidly occurred, as shown by a comparison of the scar from time to time with a plaster cast which had been taken of it before the operation.

Dr. Steavenson also replied. He said that in stricture a process of electrolysis occurred, but suggested that when electricity was used for the treatment of cystitis and incontinence it acted upon the nerve-centres in the cord and strengthened their inhibitory action. When the negative pole was used for application to the tissues no decomposition of the metal pole occurred (this did occur if the positive pole were used), but an action similar to that caused by the application of caustic potash. You could, however, limit the action and remove the electrode as soon as a sufficient application had been made. This could not be done in using caustic potash. Mr. Bruce Clarke and himself, he said, had been led to take up the subject by the American literature on the subject. Dr. Newman, of New York, had had a hundred cases (and some of them were now of eleven years' standing) in which no recontraction had taken place.

Mr. Reginald Harrison, of Liverpool, then read a paper on

THE TREATMENT OF URETHRAL STRICTURE BY INTERNAL AND EXTERNAL URETHROTOMY COMBINED.

Mr. Harrison said he had known no case in which urethrotomy had been followed by a stricture. Where rupture of the urethra had occurred, if the urethra were excised and the wound treated as a lithotomy wound, a traumatic stricture did not necessarily result. It was almost invariable for urinary fever to occur after urethrotomy. But this was not so after lithotomy. He thought it had something to do with the urine, and referred to M. Bouchard's views on

TOXIC URINE,

which he had recently discussed at length in the *Liverpool Medical Journal*. Mr. Harrison said he had determined—after performing internal urethrotomy—to open the membranous urethra, and pass a catheter thence into the bladder, so that no urine passed over the wound caused by the internal urethrotomy. During the last two and a half years he had now adopted this procedure in twenty cases. All were selected cases, in which there was great contraction. No rigor followed the operation in any case, and in most of them no contraction occurred. In every one of the twenty cases the healing of the perineal opening was perfect. Mr. Harrison said his method was no novelty, for Professor Annandale, of Edinburgh, practised it in 1875. Otis also wrote advocating the same combined method for strictures deeper than five and a half inches.

Professor Pancoast showed a silver bougie-catheter devised for the purpose of keeping the urine from the wound.

Dr. Ward Cousins and Mr. Walter Whitehead also spoke.

Mr. Reginald Harrison then replied, and said it was a question of perfect drainage.

WHERE DRAINAGE WAS PERFECT THERE WAS NO URETHRAL FEVER.

The meeting then adjourned for an hour for luncheon.

On resuming the work of the Section, at 2 P.M., Mr. Noble Smith read a paper entitled

ON OBSCURE DISEASE OF THE SPINAL COLUMN.

Spinal cases were sometimes very obscure, he said, and pain might be absent. Caries of the spine was nearly always the effect of scrofula, and rest for the diseased part was necessary, or the patient would get worse and die. Surgeons differed as to the method of applying it. He believed plaster-of-Paris might be used more freely if applied on a different method. He objected to pressure being made on the side of the thorax. Mr. Noble Smith advocated the use of an apparatus applied to the back only and leaving the chest free.

Mr. Jessop, of Leeds, having made a few remarks, Sir William Stokes, of Dublin, then read a paper on

ACUTE MYXŒDEMA FOLLOWING THYROIDECTOMY.

The case was that of a young girl with enlarged thyroid. There was not only considerable deformity, but urgent dyspnœa to such an extent as to lead them to think tracheotomy might be required. He operated on the lines laid down by Kocher, and the operation was difficult. Considerable hemorrhage occurred, although the vessels were secured as far as possible before being divided. The operation was performed antiseptically, and the wound afterward dressed with sublimate gauze. Only the left lobe of the thyroid was removed. After the operation the right lobe lessened, but this decrease in size was not permanent. It again enlarged and caused so much dyspnœa that a second operation for the removal of the right lobe was attempted. The second operation was also difficult, and occupied an hour and a half. The vessels were very friable. The patient was

much collapsed, and hypodermatic injections of ether were made and brandy given internally. Milk and beef-tea were afterward given. The tumor removed weighed seventeen ounces. On the second day fair reaction occurred. All was satisfactory until the eleventh day. The pulse, temperature, and respirations were normal; the wound aseptic, and union firm. On the eleventh day the patient was sitting up and seemed well. On the twelfth day the patient was still going on well, so far as regarded her pulse, respirations, and temperature, but she complained of a dull aching pain in her legs and knee-joints. Then an epileptiform convulsive seizure came on. Subsequently slight puffy swelling of the hands and feet was noticed, and also some mental torpidity. These symptoms increased up to the twenty-first day. The convulsive seizures occurred again and again, and each one left the patient weaker and with greater pulmonary oppression. Two days later she died. At the autopsy the lungs were found highly œdematous and the epithelium was desquamating.

MR. ERICHSEN referred to the history of the subject and suggested that

ONLY DIVISION OF THE ISTHMUS SHOULD BE PRACTISED.

Had anyone, he asked, seen a case in which the isthmus had been divided causing atrophy of one lobe without any further result?

MR. LENNOX BROWNE then read a paper on

THE MORE COMPLETE SURGICAL TREATMENT OF SUFFOCATIVE GOITRE.

He said the distinction between fibrous and cystic goitre was not maintainable. It was to Sir Duncan Gibb that we were indebted for the suggestion to divide the isthmus. He remarked that menorrhagia was a frequent complication of thyroid tumors, though, in young girls, amenorrhœa occasionally occurred.

MR. HEMMING asked whether any part of the isthmus should be removed? He had seen one case in which a part of the isthmus had been removed, and another in which simple division had been practised.

MR. JESSOP referred to a case in which he thought the central lobe produced pressure.

MR. LENNOX BROWNE said he had removed a portion of the isthmus in one case. His impression was that the central lobe produced pressure rarely.

MR. WALTER WHITEHEAD then read a paper on

THREE HUNDRED CONSECUTIVE CASES OF HÆMORRHOIDS CURED BY EXCISION.

He had, he said, abandoned the ligature, as he found that the disease recurred. After abandoning the ligature he had tried the cautery in over fifty cases, with a resulting conviction that it was inferior to the ligature. He had never used it since 1876. Then he had adopted excision and used it in every case, with the exception of a few in which he had employed galvano-puncture. He had had no death, no secondary hemorrhage, no complications, and, to the best of his knowledge, all his patients were safely and permanently cured. He observed that no surgeon understood the anatomy of hæmorrhoids until he had removed them from living patients. They were not distinct tumors, but a plexus of veins surrounding the gut was invariably involved. He preferred the lithotomy position. Instrumental dilatation of the sphincter was objectionable. The incisions should be made through mucous membrane, and not through the skin.

Professor Pancoast and Mr. Jessop then made a few remarks, the latter being in favor of the cautery. Mr. Reeves also joined in the discussion.

MR. ERICHSEN remarking that

CONTRACTION SOMETIMES FOLLOWED THE USE OF THE CLAMP AND CAUTERY,

asked whether such was the case after the galvano-cautery?

MR. WHITEHEAD replied, and said that on an average his patients were able to resume business in ten days.

MR. CHARLES SMITH, of Brighton, then showed and explained his

NEW CLAMP FOR THE TREATMENT OF HÆMORRHOIDS

in place of reading the paper on the same which had been announced by him. It was, he said, on the model of the "spanner," as would doubtless be observed by those of a mechanical turn of mind. He remarked that ether was an objectionable anæsthetic in rectal cases, as it caused congestion of the rectum.

MR. BENTON then read a paper on

FISTULA IN ANO OF THE HORSE-SHOE SHAPE.

It was, he said, very rare, and he had only met with five instances among seven hundred and fifty cases of rectal disease.

MR. STARTIN read a paper on

THE SURGICAL TREATMENT OF ACNE AND LUPUS.

He had used electrolysis in treating the latter, and exhibited the needle he employed for the purpose. He used a Grove's battery of twenty cells.

DR. WILE, of Newtown, Conn., then read a paper

ON THE RELATION WHICH ALIMENTATION BEARS TO THE RESULTS OF SURGICAL PRACTICE.

He had, he said, failed to find any treatise on diet in surgical practice in libraries containing fifty thousand volumes of medical works. There were works on diet, and special works on invalid diet, and diet for infants, but none on diet for surgical patients, nor had he been able to find even an article on the subject. In surgical cases he urged that those substances should be given as food which yielded the largest amount of albumen to the blood. The processes of repair in a part only went on when it was abundantly supplied with albuminous bodies. It was necessary that an adequate supply of these should be supplied to the blood in such a form as could be easily digested. Suitable aliments were milk—either simple, or pancreatized by the addition of pancreatic extract and bicarbonate of soda—eggs, slightly cooked, and meat, either cooked or, in some cases, given raw.

Papers by Mr. F. Churchill ("On the Multiple Causation and the Immediate Treatment of Congenital Club-foot") and by Mr. F. B. Jesset ("Surgical Treatment of Certain Tumors of the Neck") were then read. The latter advocated early interference with cervical tumors, and said they should not be allowed to grow to a large size unchecked.

The proceedings of the Section then terminated.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

Tenth Annual Session, held at Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

(Continued from page 275.)

WEDNESDAY, AUGUST 25TH—FIRST DAY—MORNING SESSION.

IN the absence of the author, DR. G. H. FOX, of New York, a paper was read by the Secretary, entitled

REPORT OF A CASE OF LYMPHADENOMA (MYCOSIS FUNGOIDE) AND AUTOPSY.

The paper described the case of Mrs. G——, thirty-three years of age, the mother of six children. During pregnancy, in 1881, she suffered with general pruritis, which passed away after confinement in October. A year later, small, flattened, circular tumors appeared in the axillæ and on the breasts. These became moist, and were accompanied with a burning sensation. The eruption disappeared from these situations and reappeared upon the back and other portions of the body. After the birth of her last child, in February, 1885, a tumor developed at the inferior angle of the left scapula. The lesions on the other parts of the body disappeared, with the exception of two spots on the finger and one on the left

cheek. The tumor on the left scapula gradually softened and disappeared.

The patient was admitted to the hospital in October, 1885, and was fairly well nourished. There were at this time numerous tumors over the body, some of which were superficially ulcerated. The worst tumors were on the breast. Hypodermatic injections of Fowler's solution were used without benefit. Chaulmoogra oil was given in increasing doses without causing any improvement.

The patient died in April, 1886. The microscopical examination gave the usual appearances of these growths. The internal organs were found to be normal.

A NOTE RELATIVE TO THE BULLOUS ERUPTION OCCURRING AFTER THE INGESTION OF IODINE COMPOUNDS.

A paper with this title was, in the absence of the author, Dr. J. N. Hyde, of Chicago, read by the Secretary.

The first case described was that of an infant, aged seven months. Three weeks before coming under observation the eruption made its appearance. The face, the dorsal aspect of the hands and forearms, and the scalp were covered with isolated whitish, split-pea to marble-sized, flattened, slightly umbilicated lesions resembling molluscous tumors. The contents of the lesions were inspissated, thick, and grumous. It was learned that iodide of potassium in one-grain doses had been administered for a febrile attack. On the discontinuance of the iodide and the use of antiseptic powder the lesions rapidly disappeared.

Case II.—A lad, fifteen years of age, who had recently undergone an operation for necrosis of the right femur, developed an eruption involving the entire body. There were two distinct sets of lesions. That which predominated was composed of annular circinate plaques, varying in diameter from several centimetres to half a metre. There were also here and there, particularly about the finger-ends, distinct blebs. The patient had been taking iodide of potassium in fifteen-grain doses. This was discontinued and the eruption speedily disappeared.

The speaker then referred to other cases of similar eruptions described by various writers, and in conclusion presented the following interrogative propositions:

1. Are there not three sub-forms of the bullous exanthem developed in certain individuals after the ingestion of iodide of potassium?

2. Is not the first and most common of these to be generally recognized in persons of advanced age and cachectic condition, the rash being then present in the form of typical bullæ?

3. Is there a second and still rarer sub-form, in which the eruption is displayed in di- or polymorphic manifestations, typical, perfect bullæ being then mingled with papules, tubercles, scarlatiniform maculations, or with other and different lesions?

4. Is there not a third and rarer sub-form, the quasi-bullous rash to be most frequently recognized on the face and dorsal aspect of the hands and forearms of infants and children, where the lesions are semi-solid, slightly umbilicated, and filled with inspissated, yellowish matter, and which may shrivel and dessicate on the suspension of the drug inducing the condition?

5. Is this last-described lesion one to be recognized solely as the result of the ingestion of iodide of potassium, never under other circumstances, and one as peculiar to the special condition it represents as is the gumma to syphilis?

Adjourned until evening.

Evening Session.

Dr. R. W. Taylor, of New York, read the first paper, which was entitled

PRECOCIOUS GUMMATA.

The following conclusions were presented:

1. Like the osseous affections, affections of the nervous system, malignant syphilides in general, besides many other affections, the gummata syphilæ may be precocious in appearance, occurring as early even as the second month of infection, but usually in the third or fourth month, or after that time.

2. Of the precocious gummatous syphilide or gummata there are three quite clearly marked forms: First, the early, general, and copious form; second, the more localized form, which may invade several regions, is usually symmetrically distributed, and sometimes even is confined to one region, particularly one side of the face or scalp, and the roof of the mouth; and third, a form in which more or less severe neuralgias precede and accompany the eruption, which in many particulars resembles simple erythema nodosum, but which in its etiology is not in any way related to this simple form of eruption, but is a direct outcome of the syphilitic diathesis.

3. That these precocious gummata partake in general of the features of those of later forms, but that they differ in a more acute invasion, in a much more rapid course, and are usually not as profound and destructive in their action as the classical eruption.

4. That of these precocious forms of gummata, there are found to be two varieties: one a non-ulcerative or resolutive, the other ulcerative.

5. That in the treatment of these precocious syphilides, a combination of mercury and iodide of potassium is much more efficacious than is mercury alone.

CLINICAL NOTES ON SCABIES.

The speaker, Dr. F. B. Greenough, of Boston, had noted a rapid increase in the number of cases of scabies seen during the past few years. The number of cases had rapidly increased from three in 1879 to one hundred and sixty during the last year. Inquiries as to the number of members of the same family of whom the patients could give an account as being similarly affected gave one hundred and ten such cases, which, with six cases seen in private practice and the one hundred and sixty above reported, made a total of two hundred and seventy-six cases that had come under his cognizance during the past year. The percentage of cases of scabies to other cases of skin disease had varied from three-tenths per cent. in 1876 to over thirteen per cent. during the past year. This great increase in frequency seemed to be one of the most interesting and important points brought out by his notes.

The facts which were especially noticed were, the few cases in which typical burrows could be found; the great constancy of the manifestations on the penis in male subjects; the difference of the symptoms produced by scratching, according to the situation of the lesion; and the success of treatment. He had used almost entirely an ointment consisting of two parts of sulphur, one of carbonate of potash, and three of petroleum ointment, simply cautioning the patient against applying it to inflamed and pustular localities. He referred to the distribution of the eruption as of importance in the diagnosis of difficult cases, and called attention to the differential diagnosis between scabies and certain other cutaneous diseases.

DISCUSSION.

Dr. A. R. Robinson, of New York, suggested that in cases where there was difficulty in the diagnosis, a vesicle be opened and its contents examined under the microscope, for the young acari or the fæces.

Dr. L. N. Denslow, of St. Paul, had seen a number of cases in which no burrows could be found, but under treatment suitable for scabies they have recovered. The treatment used has been thorough scrubbing from head to foot, followed by the application of sulphur ointment.

Dr. E. B. Bronson, of New York, agreed with the author of the paper as to the frequent absence of the cuniculi. In many cases he had depended largely upon the elongated character of the efflorescence in making the diagnosis. For three months, he treated all cases of scabies with naphthol, using a fifty per cent. preparation,

rubbing the body thoroughly with this once. This has produced a satisfactory result.

Dr. S. Sherwell, of Brooklyn, recommended as a prophylactic the sprinkling on the sheet of a teaspoonful of the dry sulphur. This acts as a disinfectant and is unpleasant to the acarus.

Dr. H. W. Stelwagon, of Philadelphia, presented some

CLINICAL OBSERVATIONS REGARDING THE VALUE OF RESORCIN, ICTHYOL, AND LANOLIN IN CUTANEOUS DISEASES.

Resorcin.—In eczema it is rarely of benefit, but possesses some power over the itching. For this purpose a six per cent. ointment is useful. In tinea sycosis it has proven of some value in ten to twenty per cent. strength. In tinea tonsurans it is inferior to the remedies usually employed.

In seborrhœa and alopecia dependent upon this disease, a lotion consisting of a drachm of resorcin, one or two drachms of castor-oil, five minims of Peruvian balsam, and four ounces of alcohol, was of value. In tinea versicolor it was found less useful than a solution of hypophosphite of sodium. In psoriasis, and in one case of lupus erythematosus, the result was negative. In one case of superficial epithelioma a fifty per cent. ointment produced a good result; in a second case a fair result; and in a third the result was negative.

Icthyol.—In a small proportion of cases of rosacea and acne vulgaris a ten to twenty per cent. preparation was found beneficial. In furunculus it acted with good results in three cases when applied as a twenty per cent. plaster; in the fourth case it had no effect. It was of service in psoriasis, and also in a case of lupus erythematosus. In favus it was used without effect.

Lanolin.—In some cases, as an ointment base, this is superior to the ordinary fats in use. Where a simple protective action is desired, it is inferior to vaseline, cold-cream, or lard. In chronic cases, where there is infiltration, and a degree of penetration is the object, lanolin is especially valuable. The main disadvantage of lanolin, as now manufactured from sheep's wool, is its strong sheepy odor. In a few acute and subacute cases of eczema, lanolin, for some reason, proved irritating. As a rule, however, it is bland and unirritating.

The meeting then adjourned.

Thursday, August 26th—Second Day—Morning Session.

The first paper, by Dr. G. H. Tilden, of Boston, was entitled

TROPHONEUROSIS OF THE SKIN CAUSED BY INJURY OF THE MEDIAN NERVE.

He described the case of a carpenter, wounded in the wrist by a saw four months before coming under observation. Three or four days after the infliction of the injury there was loss of the tactile sense, and a feeling of numbness in the last two phalanges of the fore- and middle-fingers. This steadily increased. Three weeks after the accident a bulla appeared upon the terminal phalanx of the middle-finger. Similar lesions have developed from time to time upon the last two phalanges of the fore- and middle-fingers. The bullæ appear every two or three weeks, and are unaccompanied by any subjective sensation. The skin over the affected phalanges is of a white color and of glossy texture.

Six weeks' treatment with the Faradic current caused decided improvement in all the symptoms. During this period only one bulla formed. He then stopped treatment and returned to work. Three weeks later all the former symptoms suddenly returned. It was suggested that an incision be made over the seat of injury with the view of determining the exact condition, and, if possible, remedying it. To this the patient did not consent.

The treatment of these cases consists in the use of electricity and the application of blisters over the seat of injury. A last resource is to cut down upon the affected nerve and endeavor to relieve any constriction or pressure upon the nerve which may be found. If no such condition is detected, resection of a portion of the nerve might be advisable, since complete section is not apt to be followed by spontaneous trophic changes, and since it has been found by some observers that resection of a portion of the affected nerve is sometimes followed by the arrest of the trophic changes.

Dr. James C. White, of Boston, read a paper entitled

NATIVE PLANTS INJURIOUS TO THE SKIN.

The speaker enumerated over fifty species which have irritating properties when brought in contact with the skin. With reference to rhus poisoning, the speaker said that the rhus toxicodendron was comparatively innocuous, while the rhus venenata was the most poisonous species of this plant.

Dr. H. G. Piffard, of New York, read the next paper, entitled

NOTES ON DRUGS,

in which he referred briefly to several recently introduced preparations.

Dr. F. B. Greenough, of Boston, then read

A FEW ADDITIONAL NOTES ON PSORIASIS.

The paper was supplementary to one presented at the last annual meeting of the Association. The author had attempted to obtain further testimony in reference to the general health of the patients affected with psoriasis. He found that, as a rule, patients with psoriasis were above par in general health and strength. He had records of twenty-nine cases out of 1,220 cases of skin diseases, giving a ratio of cases of psoriasis of two and one-third per cent. In twelve cases in which evidence could be obtained, four gave a decided history of the existence of disease in some member of the family. The fact that these cases showed such a high standard of general health he considered a strong argument against the possible connection between psoriasis and syphilis.

Dr. A. R. Robinson, of New York, related the history of a case of

CHONDROMA OF THE UPPER LIP.

The tumor occupied the right side of the upper lip of a man thirty-six years of age. It had been growing for two years, and was one inch in length by three-fourths of an inch in diameter. It was egg-shaped, the broad end having its seat in the submucous tissue, among the mucous glands. The mucous and cutaneous structures were freely movable over the tumor, which was sharply limited, somewhat encapsuled, and nourished by a small artery entering at the base. Microscopical examination showed the tumor to consist of embryonic, gland, and connective tissue. The gland tissue was formed of hypertrophied mucous glands and new gland tissue. The connective tissue was myxomatous, fibrous, and cartilaginous. There were several islands of cartilage, the largest being in the central part of the tumor. All varieties of normal cartilage were present, viz., hyaline, fibrous, and reticular, and also the variety met with in the heads of cephalopodes, namely, cartilage with ramifying or branched cells, *chondromes à cellules ramifiées.*

Dr. P. A. Morrow, of New York, read a paper on

KERATOSIS FOLLICULARIS, ASSOCIATED WITH FISSURING OF THE TONGUE AND LEUKOPLAKIA BUCCALIS.

The patient, C. O——, a sailor twenty-one years of age, came under observation in December, 1885. Five years previously, soon after beginning his seafaring life, he noticed a number of blackish points upon the back of the hands, some of which he squeezed out. Soon afterward these appeared upon other parts of the body. They improved when he was on land, bnt were aggravated when he was at sea. The entire surface of the body, with the exception of the face, palms, and soles, was

found to be the seat of the follicular disorder. The ducts of the sebaceous glands were occupied by comedo-like bodies projecting sometimes one-fourth to one-half an inch above the surface. From many of the follicles small white hairs protruded. The comedos, when pressed out, were hard and dry. The hard portion of the comedo was continuous with an adhesive substance dipping deeply into the follicle. There was no evidence of irritative or suppurative action. They were not accompanied with itching.

The tongue was large and rough to the touch, the surface was deeply fissured, the fissures extending to the submucous tissue. The buccal mucous membrane presented a bluish-white appearance, thickened and raised in places, forming distinct plaques which were superficially fissured. The patient stated that the tongue had been white and a little sore ever since he could remember. The absence of irritation or marked sensitiveness of the fissured organ was quite noticeable. Examination seemed to exclude the possibility of a syphilitic origin. The speaker referred to other cases which had been reported. He objected to the term icthyosis, since that suggests a disease of a different nature. He selected the term keratosis follicularis as more correctly expressing the pathological condition present, as well as indicating the anatomical seat of the disorder. Drawings representing the microscopical appearances of the lesions were presented.

Dr. J. E. Graham, of Toronto, Canada, presented a

CLINICAL STUDY OF SCLERODERM.

The author first related the histories of two cases of this rare disease. The first patient, Mrs. R——, forty-seven years of age, had previously suffered from rheumatism. The hardening of the skin began in March, 1882, and was first noticed over the back of the neck. It gradually spread so that, in about ten weeks, the integument over the greater part of the body was affected. The movements of the limbs as well as those of respiration were impeded. The internal treatment adopted was liquor ferri iodidi and liquor arsenitis. A faradic bath over the surface of the skin was used. In six weeks the skin began to grow softer, and in ten months the patient was quite well. There has been no return of the difficulty.

The second patient, Mr. H——, forty-seven years of age, came under observation in May, 1886. There was a history of hereditary rheumatism. The disease had commenced some months previously. The first symptoms were stiffness of the limbs with œdema of the lower extremities; then hardening of the skin over the hips was noticed; this gradually spread and was accompanied with pigmentation. The treatment consisted in the administration of potassium iodide at first, and latterly of salicylate of sodium. There has been some improvement under this treatment.

In his remarks in connection with the disease, the speaker referred to the following points: 1. That the disease is found principally in temperate climates, and occurs in seasons when there are sudden changes in the weather. 2. That it is more closely related to rheumatism than has been supposed. 3. That although morphœa has in all probability a similar pathological origin to scleroderma, yet the clinical distinctions are so marked that at present it is expedient to treat it under a different name.

Dr. L. N. Denslow, of St. Paul, described a case of scleroderma in which benefit has followed the daily use of the constant current for six months.

Dr. Le Grand N. Denslow, of St. Paul, read a paper on

CARCINOMA CUTIS.

The skin of the right chest from the second to the seventh rib, and from the posterior border of the axilla to the median line, was covered with a nodular new-growth which presented no ulceration. Around the nipple the nodular mass reached a thickness of one inch. The older portions of the growth were covered with thickened epidermis and thick brown scales. There was slight enlargement of the axillary glands. The different nodules were not movable beneath the skin, but the whole mass was free from the fascia. The mass was the seat of occasional neuralgic pains. The duration of the growth was seven months. The patient died four months after coming under observation.

Dr. I. E. Atkinson, of Baltimore, said that these cases are exceedingly malignant. He mentioned a case in which the disease ran its course in two or three months. These cases are so malignant that it would seem that no operative procedure is justifiable.

Dr. R. W. Taylor, of New York, referred to two cases of hard chancre of the nipple in men, in which the induration was so marked that for a time they were looked upon as cases of cancer of the nipple.

Dr. I. E. Atkinson, of Baltimore, read a paper on

SCARLET FEVER AND SCARLATINIFORM ERUPTIONS FOLLOWING INJURIES AND OPERATIONS.

The following conclusions were presented: 1. Unprotected persons who have suffered injury or undergone operation are much more liable to scarlet fever than healthy individuals. 2. When an epidemic tendency to these symptoms prevails after injuries and operations, it may be concluded that true scarlet fever is present. 3. Septicæmia is occasionally accompanied with scarlatiniform eruption. 4. Medicinal eruptions, especially from cinchona alkaloids, may follow accidents and injuries.

DISCUSSION.

Dr. P. A. Morrow, of New York, mentioned the rash which often follows the use of antipyrine, and which frequently simulates scarlatina, although it is usually of a more measly character. Again, carbolic acid and iodoform dressings will often produce rash presenting the objective appearances of scarlet fever. The eruption known as the "doctor's rash," which appears upon the persons of sensitive individuals stripped for examination, was also referred to.

Adjourned.

Friday, August 27th—Third Day—Morning Session.

Dr. J. E. Graham, of Toronto, Canada, exhibited the specimens from a case of ainhum.

Dr. S. Sherwell, of Brooklyn, read the first paper, which was entitled

REMARKS AND QUERIES ON, AND AS TO, THE RELATIVE FREQUENCY OF MOLES AND THEIR PATHOLOGICAL CHANGES ON THE HEAD AND FACE.

In looking up the statistics of one of the institutions with which he is connected, he found that, in a period of eighteen months, he had seen forty-seven cases suffering with neoplastic and hypertrophic growths. In thirty-six of the cases the growths occupied the face and head. In eleven cases only were the growths found on the body and limbs. Seventeen of the cases, in which the growths were on the face, were classed as epithelioma.

Moles, and similar growths, while common on other parts of the body as well as on the face, yet in other situations seem less likely to undergo destructive pathological changes. The field electively most inimical to the presence of these growths, and destructive activity in them when already present, may be bounded thus: A quadrangle just taking in the lower lip, the corners of the mouth, extending back to the ears on both sides, vertical lines extending upward to about an inch above the supra-orbital ridge, united by another horizontal line. Of the space thus included, the vicinity of the eyelids and bridge of the nose was, in the author's experience, the most usual seat of these growths.

The most rational explanation for the frequency of these growths in the situations described, is the nature and abundance of the circulatory nutrition, which must favor

hyperplasia. If, however, we accept this, why should those errors of the capillary system, such as nævi, not oftener degenerate? He had frequently operated on these latter deformities, often causing much irritation, but had never seen more than a slight keloid change result. The speaker then referred to the special danger of malignant degeneration which attended the presence of moles in persons of advanced life.

In regard to treatment, he had come to the conclusion that when malignant action is either present or suspected, the combination of Volkman's curette, followed by the potential cautery, is the most efficient and easiest method of treatment.

DR. I. E. ATKINSON, of Baltimore, held that the probable explanation of the frequency of the presence of moles, etc., upon the face, as compared with other portions of the body, was that, when in this situation, patients seek relief on account of the disfigurement, while when covered with the clothing attention is not attracted to them.

DR. R. W. TAYLOR, of New York, said that Dr. Sherwell was to be congratulated upon the clear manner in which he has called attention to the danger of these various growths upon the face in a person over forty-five years of age. Such growths are very prone to assume malignant action. In the same connection it may be remarked that any inflammatory mass upon the prepuce, particularly if the result of anterior lesion, should in old persons always be ablated.

DR. W. A. HARCAWAY, of St. Louis, presented some

NOTES OF A CASE OF EXFOLIATIVE DERMATITIS (PITYRIASIS RUBRA?) WITH BULLOUS LESIONS.

The patient was forty-five years of age, stout, and somewhat nervous. The disease came on three weeks previously, after a night of fatigue and exposure. The following day a red patch appeared on the pit of the stomach. Others developed, soon running together, leaving no healthy skin between. There was very little scaling at first, and no moisture. The chest, arms, back, and thighs presented the usual appearances of pityriasis rubra. There was neither moisture, crusts, nor appreciable infiltration, the skin was shining and of a violaceous hue. In the morning a handful of scales could be gathered from the sheet, but they were not as large as usual. Three or four days after the first visit there appeared upon the thighs, abdomen, and buttocks a number of tense bullæ. Their appearance was preceded by a distinct chill, and followed by a moderate elevation of temperature. The blisters did not run into each other. The bullæ appeared in successive crops of not more than a dozen, each crop being preceded by a chill. Quinine was freely administered, and at the end of a week the bullæ ceased to appear. The patient gradually improved.

The writer thought that this and other cases which he had seen, showed diseases usually supposed to run a dry course, may, under certain circumstances, be complicated with lesions containing fluid.

DR. G. H. TILDEN, of Boston, reported

A CASE OF PROBABLE TUBERCULOSIS OF THE SKIN.

DR. LE GRAND N. DENSLOW, of St. Paul, made a supplementary report with reference to

THE TREATMENT OF ACNE BY THE USE OF SOUNDS.

At the last meeting he had reported five cases in which this plan of treatment had been of value. Four of these cases were adults, and all had remained well. The fifth case was that of a boy about fourteen years of age, and in this case relapse had occurred.

A communication with reference to the organization of a congress of American physicians and surgeons was received, and the following Committee of Conference, to report at the next annual meeting of the Association, was appointed: Drs. H. G. Piffard, of New York; F. B. Greenough, of Boston; R. B. Morison, of Baltimore; G. H. Tilden, of Boston, and Le Grand N. Denslow, of St. Paul.

The following officers were elected:

President—Dr. H. G. Piffard, of New York.

Vice-Presidents—Dr. F. B. Greenough, of Boston; Dr. R. B. Morison, of Baltimore.

Secretary—Dr. G. H. Tilden, of Boston.

Treasurer—Dr. Le Grand N. Denslow, of St. Paul.

The Association then adjourned to meet at the call of the Council.

Correspondence.

ICE CREAM POISONING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your review of my report to the Michigan State Board of Health on the analysis of the Lawton cream, there are a few statements which I hope you will permit me to comment upon.

In the first place I have never "claimed," as you say, "to have discovered the *fons et origo* of the poison in a new ptomain," etc. I hope that I am sufficiently acquainted with the nature of ptomains to know that they are produced by fermentation or putrefaction. The *fons et origo* of the poison must be the ferment which produces the ptomain. Of this I speak as follows: "How the special germ which produces the poison found its way into the Lawton cream I cannot say; but that it was present in the milk, or was contained in the eggs used, I think cannot now be doubted."

I desire it to be distinctly understood that I do not claim that tyrotoxicon has existed in every ice-cream which has produced untoward effects upon man. Mineral poisons have been found in ice-cream, and Dr. Bartley's idea that the poisonous properties of the cream which he examined were due to the use of putrid gelatine is a rational theory. The poisonous principle in this case might arise from the decomposition of the gelatine itself; or with the gelatine there may be introduced into the milk a ferment, by the growth of which a poison might be produced. But the Lawton cream had no gelatine or mineral poisons either in it.

In view of Dr. Morrow's letter in your issue of July 27th, I am sorry that you did not refer to my proof, that the vanilla used in the Lawton cream was not poisonous. The vanilla which remained in the bottle was sent to me, and on page 4 of the report you will find the following: "Mr. Novie and I took at first thirty drops each of the vanilla extract. No ill effects following this, Mr. Novie took two teaspoonfuls more, with no results. This settled the question of the poisonous nature of the vanilla more satisfactorily than could have been done by a chemical analysis." Moreover, as you will see from page 7, by adding a piece of the solid portion of the Lawton cream, about the size of a filbert, which had been washed with distilled water to normal milk, and then following the details of the Lawton caterer, with the exception that no flavoring whatever was used, I made a cream which was highly poisonous.

I find that in my report the time which elapsed between the making of the vanilla custard and its freezing is stated only indirectly, and that by giving the time during which I allowed the custard which I made to stand before packing in ice. The testimony on this point, as obtained from Lawton, from different persons, varies as to the exact time, some placing it at one hour and a half, others at four hours. I took three hours as the probable time, as you will see from my report.

I have recently received a letter from Lawton which throws much light upon this subject. Permit me to give the following extract: "The cream was frozen in the back end of a wooden building owned by C. M. Morrick,

and located on Main Street. It is surrounded by shade, has no underpinning, and the sills have settled into the ground. There are no eave-troughs, and all the water falling from the roof runs under the building. The street also largely drains under the building, the streets on two sides having been raised since the building was erected. The building had not been occupied for a number of months, consequently had no ventilation, and what is worse, the back end (where the cream was frozen) was last used as a meat market. The cream which was affected was that portion last frozen, consequently it stood in an atmosphere more like that of a privy vault for from one and a half to two hours before being frozen. It seems to me that anything so sensitive to surroundings as milk could not escape being affected by such surroundings."

The above, written by an unprofessional man, and written after my report, is, to my mind, very valuable information.

You regret that I have not given the chemical properties of tyrotoxicon. These, so far as I know them, are given in *Zeitschrift für physiologische Chemie*, B. x., H. 11. As they had been presented to the Board a year ago, I did not repeat them; but I gave the reference, and any chemist can find them.

You think that my theory does not explain the occurrence of poisoning, with the production of identical symptoms, from the use of other alimentary preparations, as pastries, puddings, etc., in which only a minimum quantity of milk is used. Does the fact that a ferment will produce a poison by its growth in milk prove that the same ferment will not produce a poison in pastries, puddings, etc.? There are present the same foodstuffs—albumen, fat, and sugar. Or does similarity of symptoms always prove the presence of the same poison? In a general way, may we not say that symptoms arising from poisonous cheese or ice-cream are identical with those of arsenic? At least most physicians, in treating such cases, have almost invariably diagnosed arsenical poisoning from the symptoms.

That there is no better food for children than good milk, I will claim as earnestly as anyone. But that unclean nursing-bottles or other foul receptacles of milk are beneficial to the health of children I doubt, and I simply suggested the possibility of the poison being generated in such vessels.

As to the direct agency of bad milk in causing cholera infantum, and the desirability of withholding milk as food during the course of the disease—and this is the only time in which I have recommended that milk be withheld—I am now collecting evidence. I will only say that several physicians in this State are now treating cholera infantum in accordance with the suggestions of the report, and they claim to be very successful, and I have not heard of any "boom for the venders of artificial foods" being created thereby. The use of a little rice-water or mutton-broth during a short course of cholera infantum can hardly lead to a great boom for the venders of artificial foods.

Respectfully,
V. C. VAUGHAN.

INTRAVENOUS INJECTION OF SALT SOLUTIONS.—Dr. F. B. Harrington has tabulated all the recorded cases of transfusion with salt solutions. He recommends that the solution be made as follows: Sodii chloridi, 6 grammes; sodii bicarbonatis, 1 gramme; aquæ destillatæ, 1,000 grammes. The solution should be warmed and kept at a temperature between 100° F. and 104° F. The solution should enter the circulation at a low pressure, and its effect on the heart should be carefully watched. Gravity pressure is safer than a syringe, an elevation of from one-half to three feet being sufficient. The amount used would depend upon the effect upon the circulation, but it may be from one to four pints.—*Boston Medical and Surgical Journal*, May 27, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 29 to September 4, 1886.

MIDDLETON, P., Major and Surgeon. Assigned to duty at St. Francis Barracks, St. Augustine, Fla., as Post-Surgeon. S. O. 126, Division of the Atlantic, September 2, 1886.

LA GARDE, L. A., Captain and Assistant Surgeon. Upon departure of Third Infantry from Fort Ellis, M. T., to proceed to Camp Sheridan, Mammoth Hot Springs, Wyo. Ter., and report to the Commanding Officer for duty, relieving Assistant Surgeon Pilcher. S. O. 87, Department of Dakota, August 27, 1886.

CRAMPTON, L. W., Captain and Assistant Surgeon. Relieved from further duty at Bellevue Rifle Range, and granted leave of absence for one month, to take effect before rejoining his proper station (Fort Bridger, Wyo.). S. O. 108, Department of the Platte, August 28, 1886.

PILCHER, JAMES E., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon La Garde from duty at Camp Sheridan, to return to his proper station (Fort Custer, M. T.). S. O. 87, Department of Dakota, August 27, 1886.

WOOD, L., First Lieutenant and Assistant Surgeon (recently appointed). Ordered to report by letter to the Commanding General, Department of Arizona, for assignment to duty. S. O. 202, A. G. O., August 31, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty in Department of the East, and assigned to duty in Department of Arizona. S. O. 203, A. G. O., September 1, 1886.

WALKER, FREEMAN V., First Lieutenant and Assistant Surgeon (recently appointed). To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 203, C. S., A. G. O.

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending September 8, 1886.

CLARK, JOHN H., Medical Inspector. Ordered to special duty, Portsmouth, N. H., and Widow's Island.

KINDLEBERGER, D., Medical Inspector. Ordered to Hospital, Washington, D. C., October 1, 1886.

GIHON, A. L., Medical Director. Ordered to Hospital, Mare Island, Cal., October 15, 1886.

ROBINSON, SOMERSET, Medical Inspector. Detached from Hospital, Mare Island, Cal., October 15, 1886, and wait orders.

SPEAR, J. C., Medical Inspector. Ordered to Naval Laboratory, New York, September 28, 1886.

BLOODGOOD, DELEVAN, Medical Director. Ordered to Hospital, Norfolk, Va., September 29, 1886.

TAYLOR, J. Y., Medical Director. Ordered to Naval Laboratory, New York, September 29, 1886.

DEAN, R. C., Medical Director. Detached from Naval Hospital, New York, and wait orders.

SIMON, W. J., Surgeon. Detached from U. S. S. Constellation, and special duty at Naval Academy, Annapolis, Md.

HENRY, C. P., Assistant Surgeon. Ordered to Hospital, Philadelphia, Pa.

FITTS, H. B., Passed Assistant Surgeon. Detached from Hospital, Philadelphia, Pa., and wait orders.

STONE, E. P., Assistant Surgeon. Ordered to Receiving Ship New Hampshire.

DICKSON, S. H., Passed Assistant Surgeon. Detached from the Naval Academy, October 1, 1886, and ordered to Navy Yard, Washington.

LIPPINCOTT, J. G., Passed Assistant Surgeon. Ordered to Naval Academy, October 1, 1886.

SHIPPEN, E., Medical Director. Detached from Naval Hospital, Philadelphia, and ordered to attend officers of the Navy and Marine Corps at Philadelphia not otherwise provided with medical aid.

HORD, WILLIAM T., Medical Director. Detached from Examining and Retiring Boards at Washington, October 5th, and ordered to Naval Hospital, Philadelphia, Pa.

DEAN, R. C., Medical Director. Ordered to duty as member of Examining and Retiring Boards at Washington, October 5, 1886.

BRANSFORD, J. F., Surgeon. Detached from U. S. S. Iroquois, and ordered to Naval Hospital, New York.

HALL, C. H. H., Passed Assistant Surgeon. Detached from Naval Hospital, New York, and ordered to Naval Hospital, Yokohama, per steamer of 21st inst.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 4, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	30	13
Scarlet fever	4	1
Cerebro-spinal meningitis	3	3
Measles	23	5
Diphtheria	33	16
Small-pox	0	0

HOW TO PRESERVE THE DEAD BODY.—Dr. H. Speier, of Duluth, Minn., writes: "In reply to the inquiry of Dr. Kennedy in THE RECORD of August 7th, I will briefly give him the method for preserving bodies invented a few years ago by Wickersheim, of the Anatomical Museum of Berlin. The process is simple and cheap, and the inventor claims that by it the color, form, and flexibility of dead animal bodies and all their tissues are completely preserved. He says that after several years sections for scientific or legal purposes can be made, decomposition and even foul odor being entirely absent. The preserving fluid is made as follows: Take 3,000 grammes of boiling water, dissolve in it 100 grammes of alum, 25 grammes common salt, 12 grammes saltpetre, 60 grammes potash, and 10 grammes arsenious acid. After cooling, filter the solution. To 10 litres of this neutral, colorless, and odorless fluid add 4 litres of glycerine and 1 litre of methyl-alcohol. Inject the body with the preserving fluid, then immerse it in the same for a few days. Rub and dry the body, envelop it in a sheet soaked in the same fluid, and place in an air-tight receptacle. If Dr. Kennedy ever uses the method given here, I should like to hear what results he gets from it."

LABOR AMONG THE NATIVES OF NEW GUINEA.—The Rev. W. S. Lawes describes, in the *Australian Medical Gazette*, of June 15, 1886, some of the customs among the natives of New Guinea in sickness and childbirth. When labor pains come on, the mother of the woman and her mother-in-law come—the former to assist the woman, the latter to receive the child. A rope is made fast to the roof and hangs at a convenient distance from the woman, so that she can hold on to it when the pains come on; her mother sits behind her, so as to support her back and head. They are always delivered sitting. When the birth is difficult (a rare occurrence even in *primipara*), a ceremony is gone through, which consists of the assembled friends performing an incantation and calling upon their ancestor god to help. It is only in extreme cases, such as malpresentation, that they endeavor to pull the child away with force. When the child is born it is received by the expectant grandmother, who sucks its mouth immediately. The cord is not cut until after the placenta has come away; when it has come the grandmother works the cord by her finger-nails until it becomes thin; she then cuts it with a piece of flint; it is not tied. The previous manipulation of the cord prevents loss of blood. The distance from the navel at which it is cut is measured on the child's thigh. Among the Motu tribe, mother and child remain in the house until the cord drops off, usually on the fifth day. Then the mother takes the child down into the sea and bathes herself and it. At Hood Point the mother takes the child in her arms as soon as it is born and plunges with it into the sea. The object is said to be to make it fearless of the sea. They are a tribe of fishermen. In the Gulf, to the west, they take their new-born babe to meet the breakers, and let the surf break over it. The same reason as above is given for it. Until the mother is able to feed her child, relatives and neighbors suckle the child. From the time the navel cord drops off, the child is given ripe bananas, when procurable, and very soon yams and other vegetables—all chewed first by mother or sister. Milk of animals is unknown among the natives as an article of diet. The children are really never weaned—a big boy, three years old, will come in from play and run up to his mother for a drink. The husband does not cohabit with his wife until the child is six or eight months old, and sometimes not until it is able to run about. They believe that it would have a prejudicial effect upon the child to do so.

SWALLOWING A CENT.—Dr. J. L. Gardner, of Voluntown, Conn., writes that he was called to see a child, two years of age, who had got a copper cent in the pharynx, whence it was pushed into the œsophagus by the mother in her efforts to relieve the choking. The writer pushed it down into the stomach, and then administered castor-oil for some days. The coin had not been passed, however, at the end of four weeks, and the child seemed to be suffering no ill effects. An irregular practitioner in the neighborhood was called in and informed the mother that there was no danger, as the stomach juices would eat up the coin. Dr. Gardner inquires whether any harm is likely to result from the lodgment of the coin in some part of the intestinal tract.

CULTURE OF VACCINE IN MUSHROOM JELLY.—Experiments have recently been made by the Finnish Medical Society in the cultivation of artificial lymph in sterilised mushroom jelly. The artificial lymph has also been dried and used for vaccination. A child was exhibited at one of the meetings who had been vaccinated by the artificial lymph in the arm. There were nine vesicles in three rows. They were all well developed, and did not present any dissimilarity, although two rows had been produced with lymph taken from different parts of the culture glass, and the third row with dried lymph from the same glass. Former experiments had not been so successful, owing to the resistance of the lymph to the effects of drying. The cultivation of the lymph has now been brought to a more satisfactory point.

NITRITE OF AMYL AS AN ANTIDOTE FOR OPIUM.—*L'Union Médicale* reports the case of a person who took two ounces of laudanum, and showed every symptom of opium-poisoning—coma, small pulse, feeble and infrequent respiration (six to the minute), coldness and cyanosis. Belladonna proved useless, while inhalation of nitrate of amyl immediately improved and ultimately restored the patient.

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Original Articles.

PERI-UTERINE INFLAMMATION.[1]

A STUDY OF PERI-UTERINE INFLAMMATION IN ITS RELATION TO SALPINGITIS, BASED UPON SIXTEEN CASES OF EXTIRPATION OF THE TUBES AND OVARIES, OCCURRING IN BELLEVUE HOSPITAL.

BY WILLIAM M. POLK, M.D.,

PROFESSOR OF OBSTETRICS, ETC., UNIVERSITY OF THE CITY OF NEW YORK.

THE purpose of this paper is the consideration of those inflammatory masses found about the roof of the vagina, generally to the sides of the uterus, sometimes behind, and but very rarely in front of it. These masses are described under the heading "Pelvic Cellulitis" and "Pelvic Peritonitis" in the works usually used by the English-speaking members of our profession, and from the time they were first noted and described have been the subject of controversy.

Let it be understood that I exclude the results of hæmatocele, of fibroid tumors of the uterus, of tubercle and cancer, of extra-uterine pregnancy, and disorders of the rectum and bladder, conditions which may simulate the masses in question, but with histories and signs so different as to preclude the chances of confounding them at the bedside.

At first, as is seen in the papers of Doherty, read before the Obstetrical Society of Dublin, May 5, 1842, and that of Fleetwood Churchill, read before the Surgical Society of Dublin, January 28, 1843, all that was claimed was, that such masses were found in parturient women chiefly, but in the non-parturient occasionally; and as Churchill, in particular, pointed out that they resulted sometimes in an abscess, no attempt seems to have been made to differentiate the point of development for such morbid products, the writers in the main resting satisfied with the assertion that they belonged to the uterine appendages. As Churchill says: "I shall therefore speak of the disease as affecting the uterine appendages, be they Fallopian tubes, broad ligaments, or ovaries, one or all—nay, as extending itself sometimes to the neighboring cellular tissue." Years before this the affection had been described imperfectly by La Motte and Puzas; but it was not until the times of Aran, Nonat, Bernutz, and Simpson that a determined effort was made to settle the important question as to the point of development and the line of propagation of these products of inflammation. Nonat maintained that the point of development was the cellular tissue adjacent to the uterus, beneath the peritoneum. Bernutz denied that any peri-uterine inflammatory mass—phlegmons as they were called—could belong to the cellular tissue immediately adjacent to the uterus, but admitted the possibility of implication of this tissue secondary to a pelvic peritonitis, and conceded the existence of phlegmons in the cellular tissue between the layers of the broad ligaments—his conclusions being that the peri-uterine masses, which during life presented all the symptoms of the so-called "peri-uterine phlegmons" or "cellulitis," were formed by the pelvic viscera being matted together by peritoneal adhesions, and, consequently, that such masses were in the peritoneal cavity.

His words are: "I find that the tumor found after death is formed by various intra-pelvic viscera being matted together as a consequence of the inflammation," and concludes that inflammation of the pelvic peritoneum is always symptomatic, that it is generally so of inflammation of the ovaries or tubes, and, comparing the post-mortem lesions with the symptoms, he is led to the belief that the majority of the more important symptoms are attributable to pelvic peritonitis, while those of the uterine and tubo-ovarian affection, although of much more importance, are very obscure. He then goes on to relate a number of cases to corroborate his views—several of the series, notably the first, being particularly interesting to us now, as they so clearly illustrate pyosalpinx and pelvic abscess as a direct result of the tubal inflammation.

These conclusions have been singularly verified by the observations of the present day, and Bernutz may be said to be, if not the first, at least the most dogmatic and precise advocate of tubal disease as a factor in the pelvic disorders of women.

It was not to be supposed that his statements would pass unquestioned. They were combated, chiefly by the English school, mainly by Sir James Simpson. The condition which Bernutz described was one so rarely fatal that but few chances of post-mortem examinations in the early stages of the disease were offered. Where the cases did die, it was in consequence of the disorder passing on to the stage of abscess, and in them the involved tissues were so altered and intermixed with false membrane that it was difficult, and even impossible, to determine the precise origin of the inflammation. On the other hand, his opponents had many opportunities among the numerous deaths from puerperal inflammation to demonstrate the existence of inflammatory swellings in the area of cellular tissue adjacent to the uterus. Still, enough was accomplished to make it certain that the masses in question were sometimes in the peritoneal cavity, that possibly they might be the result of the extension of salpingitis, and that they might end as intra-peritoneal abscesses. Out of this grew an attempt to differentiate the conditions clinically, and by some writers the lateral peri-uterine masses were classed as instances of cellulitis, while those posterior to the uterus were classed as instances of peritonitis, but still the tubes were largely ignored. Then came certain observations made by Emmet and Schultze, to the effect that the cellular tissue of the utero-sacral ligaments was often involved, so that retro-uterine masses were by some again regarded as instances of cellulitis, and were called "parametritis posterior." Here the subject rested when Mr. Tait began his work. Then, for the first time, the views of Bernutz were put in the way of verification, for it became possible to check the results of bimanual vaginal examination by direct digital exploration of the intra-pelvic regions.

In the winter of 1883 Dr. Emmet presented to the Obstetrical Society of New York several specimens of diseased tubes which Mr. Tait had given him; and, in answer to questions as to the method of diagnosis, said that the tumors which such tubes and their surroundings made in the pelvis were regarded by Mr. Tait as identical with those which we in this country had viewed as due to "cellulitis" and "peritonitis" (see "Obstetrical Society Report," December 5, 1882). A few weeks later (December 21, 1882) Dr. Gaillard Thomas read a paper

[1] Read before the Society of Physicians and Pathologists, Washington, D. C., June 18, 1886.

before the Academy of Medicine, reporting four cases which he viewed as corroborating this and other positions of Tait.

Dr. Wylie, January 15, 1885, read an interesting paper bearing on the subject before the New York Academy of Medicine, and has since followed it by another before the New York State Society. In both he commits himself to a belief in the identity of so-called chronic cellulitis and salpingitis. It is plain, then, that the opinion is rife.[1] It only remains to substantiate it. After hearing Dr. Emmet's statement and reading Dr. Thomas' report, my attention was fixed upon all such cases that came before me. My ward in Bellevue Hospital is the recipient of many patients suffering from "cellulitis" and peritonitis, of all origins and in all stages; the sufferers coming there are such (working-women) as are peculiarly exposed to the causes of pelvic inflammation. My conclusions gradually shaped themselves in the direction indicated by the English surgeon, so that during the winters of 1883, 1884, and 1885, I shifted my position to the doctrine that tubal disease is the principal factor in so-called pelvic cellulitis and pelvic peritonitis, adopting in the main the central idea enunciated by Bernutz twenty-five years ago. As time has passed, these views have become more firmly impressed upon me, so that now I regard perituterine inflammation as a dependency of salpingitis, and hold with Bernutz that in the symptomatology of these masses "the majority and the more important symptoms are attributable to pelvic peritonitis, while the uterine or tubo-ovarian affection, although of much more importance, is indicated only by obscure symptoms."

The salient question then is this: What are the inflammatory masses commonly met with about the uterus and the broad ligaments? Are they the result of parametritis (pelvic cellulitis), derived directly from the uterus and vagina, through the medium of the parenchyma, the lymphatics, or the veins, or are they the result of a perimetritis (pelvic peritonitis) derived from the uterus through the medium of the tubes? Owing to the inroads of surgery upon the pelvis this has become more than ever a grave question.

In this inquiry the position which I desire to occupy is this:

First.—That the inflammatory masses commonly found about the uterus, and which are described under the headings "Pelvic Cellulitis" and "Pelvic Peritonitis," are the result of salpingitis, plus peritonitis—the tubal disease being the direct result of disease of the uterus; that such masses are composed of the tubes and ovaries, with sometimes adjacent viscera, the whole being united by recent or organized lymph, the interspaces in acute cases, and sometimes in chronic cases, being filled with a serous exudate; that such swellings may be augmented by secondary infiltration of the adjacent sub-peritoneal connective tissue, but such infiltrations are subordinate in extent and influence to the peritoneal inflammation.

Secondly.—That these masses do not originate directly from the uterus or vagina as a *cellulitis, except* as the consequence of an *evident septicæmia* ingrafted upon those organs, after an abortion, a miscarriage, a labor, or after some operation; that even in such cases it is more than probable that salpingitis and peritonitis will be associated with and predominate over the cellular inflammation; that when these masses do begin as a cellulitis (the patient surviving the septicæmia), they rapidly tend to suppuration; that they end very rarely in the chronic indurations or swellings under consideration in this paper.

It is admitted by all that the vagina, and, chiefly, the uterus are the starting-points for these swellings; some hold that the ovaries are, but this I will not consider, as I do not think that the proofs of primary ovarian inflammation, outside of tubercular and cancerous deposits, being the initial factor in the production of the swellings in question, are conclusive, too few of the reports being explicit in excluding previous salpingitis.

The uterus and vagina being then the clearly admitted sources of the disorder, the question is in what way does the inflammation travel outward.

Through the tubes to the peritoneum; by way of the lymphatics, lymphangitis; by the veins, phlebitis; or directly through the parenchyma of the organs?

In one or the other of these ways, or by a combination of both, or all, inflammation travels from the genital tract outward.

In the first it gains direct access to the cavity of the peritoneum, in the other, by running in a more indirect way. Let us inquire as to which is the usual path. In septicæmia it travels by all. Excluding this condition it travels outward by way of the tubes. One of the most effective blows struck in favor of this last assertion was the discovery of the extreme rarity of acute metritis in the non-pregnant uterus. But the question of transmission by way of the lymphatics and veins is not so easily regulated.

Admitting, then, for septicæmia, a transmission by all the routes, will it apply to all of the puerperal inflammations or to all of the non-puerperal? The large majority of these masses are preceded and accompanied by symptoms of simple inflammation. Are such symptoms the expression of so serious conditions as lymphangitis and phlebitis? The history of such conditions, when developed in connection with the inflammations of other organs, forbids us so thinking.

Let us look at this subject from the stand-point of analogy and then examine the facts bearing upon it.

When an inflammation is started in the vagina, as in gonorrhœa, or from any irritant substance, it is a matter of daily experience that it tends to follow the mucous membrane into the uterus, and it would be singular if that inflammation, after covering the endometrium, should stop at the tubal entrance. If those tubes are capable of admitting the passage of spermatozoa and ova, their natural office, surely they would seem the easiest path of transit of the usual inflammatory process found in the uterus. There is one very suggestive fact with this question which has been the subject of considerable thought on my part. It is this: If cellulitis is so common about the uterus, why is it so uncommon about other organs? Let us, in order that the analogy may be as perfect as is possible, look into the behavior of the cellular tissue adjacent to other pelvic viscera.

Take, first, the genito-urinary tract of the male, and pass in review all the inflammatory conditions to which that tract is subject—their course is definite, with frequent extension along the various mucous surfaces, but with rarely an implication of the cellular tissue about them.

Take the prostate gland, which, in point of structure, is more nearly allied to the uterus than any other organ, and see what the history of its inflammations is. How often do we find cellulitis as a result of inflammation?

Take the penis, a mass of venous sinuses, how often do we have phlebitis as a result of its inflammations; we *do* have implication of the cellular tissue immediately adjacent to the urethra, the sub-mucous tissue, but how often does it extend to the cellular tissue entering into the composition of the entire organ?

Given a gonorrhœa, or an inflammation the result of some traumatism, and see how it will extend to every mucous tract—to the kidney on the one hand, to the testicle on the other—and how rarely are any of the cellular planes about these various organs involved to any appreciable degree.

Take the bladder and study its inflammations, and certainly they are common enough. Look next at the rectum, affected, for instance, with the ulcers of dysentery, and how often will you find inflammatory swellings in the folds or at the base of the meso-rectum?

[1] In 1876 a paper was read by Noeggerath before the American Gynecological Society upon the effect of gonorrhœa in women. In this he showed how frequently tubal disease and peritonitis resulted.

It is hard to understand that inflammation will behave so differently in these organs from that which occurs in connection with the uterus. It is much easier to believe that inflammation here will follow the same law, and travel in general along the mucous surfaces into the tubes and out at their extremities. Here a suggestive fact relates to the ureters. These canals pass through much of that cellular tissue, in their course across the floor of the pelvis, in which those upholding the doctrine of cellulitis have located these masses. If they are right, it is strange that the ureters are so rarely constricted; no other flaccid canal surrounded by indurated masses of new tissue would be likely to fare so well. With the masses in the peritoneal cavity these canals are simply pushed against the yielding pelvic floor. With such masses at the base of the broad ligament and about the cervix, constriction or compression of the ureters, with dilatation above the constriction, and the inevitable results to the kidney, would be a far more common condition in the female than post-mortem examinations now show us.

But, after all, such arguments, while useful and suggestive, are not conclusive. The facts of the autopsy and operating-rooms are the pivots of our faith in medical science.

Let me then call your attention to this fact: In a large number of post-mortem examinations made in the dead-house of Bellevue Hospital, it is noticed that, excepting those patients who have died of septicæmia, it is the rarest thing to find pelvic cellulitis, unless the cellulitis be clearly secondary to a previous inflammation of the pelvic peritoneum. On the other hand, nothing is more common than to find evidences of peritonitis about the ends of the tubes, and it is noticeable that in such cases the evidences of such inflammation diminish as you leave the extremities of the tubes; that the cellular tissue about the uterus and in the broad and utero-sacral ligaments does not present evidences of inflammation, or, if it does, such evidences are confined to that immediately underlying the peritoneum, and diminish and disappear as you approach the uterus. In these cases the tubes always show implication.

In other words, the post-mortem evidences of peri-uterine inflammation are common, and these evidences are such as to show that the inflammation was a product of salpingitis, and not secondary to cellulitis; and that if cellulitis were present, it was either secondary to peritonitis, or else was a lesion of septicæmia in common with those which belong to that disorder when originating in other structures of the body.

In this connection it is well to quote the words of the pathologist of the Woman's Hospital of New York, Dr. Coe.[1]

"Of half a dozen fatal cases of hystero-trachelorraphy and incision of the cervix, in which I have enjoyed the rare opportunity of studying carefully the sequences, in every instance the cause of death was acute, diffuse peritonitis. The inflammation could be traced straight up from the wound along the mucous membrane of the uterus as an endometritis, along the tubes as a pyosalpinx, and then to the peritoneal cavity. In none of these cases was there any evidence of acute cellulitis, although old cicatrices were not wanting." On pages 71–73 he makes other suggestive statements—speaking of the results of limited inflammation in the pelvis as observed after death: "My attention was early directed to the subject by Dr. W. H. Welch, who had for years been seeking positive proof of the existence of circumscribed indurations in the vicinity of the uterus resulting from cellulitis. Judging by a letter received from him a few days since, I infer that he is still sceptical as to their existence. I do not go as far as that. By far the greater number of these indurations are situated high up in the broad ligaments, and consist of cicatricial masses, mostly confined to the peritoneum, of tubes or ovaries surrounded by old adhesions, or occasionally of an imprisoned knuckle of intestine. The 'thickening' of the utero-sacral ligaments, so frequently alluded to in works on gynecology, has, when carefully dissected out, proved in my experience to be due, not so much to a disease of the connective tissue of these ligaments, as to a cicatricial condition of the peritoneum covering them. The induration at the bases of the broad ligaments have been the special objects of my search. I confess that I have rarely (perhaps half a dozen times) found such thickenings in the cadaver which could be referred to a pure and straightforward cellulitis." "In by far the greater number of cases, where a well-marked laceration of the cervix is present, there is absolutely no induration whatever in the broad ligaments."

Let me now offer the record of sixteen patients in whom the symptoms and signs present were those of "pelvic cellulitis" and "pelvic peritonitis," but in which abdominal section showed salpingitis, periovaritis, and peritonitis. In two of the cases there was slight œdematous swelling of the cellular tissue in the broad ligament, just beneath the spot at which an inflamed tube had rested; in the remainder the most careful examination failed to detect the slightest induration or swelling in any part of the cellular tissue that lay about the uterus or between the peritoneal layers of the ligaments.

The method of examination pursued was the following: Bimanual vaginal exploration of the uterus and its surroundings was employed in each case, both before and after the operation.

Before the operation indurated sensitive masses were present about the uterus, in each patient, and the mobility of the organ was impaired to a greater or less degree. After the operation the masses could not be found in a single case, and the mobility of the uterus was restored to about its normal range in nearly every instance. During the operation two fingers were placed astride the broad ligaments, every portion being thus readily explored. The entire pelvic floor was likewise examined by touch, and whenever the method seemed incomplete the opposing fingers of an assistant were placed in the vagina. Between the two it was impossible for any induration or thickening to escape detection.

An item of interest in many of the cases is the appearance of abortions and miscarriages as etiological factors.

Case I.—M. C——, aged twenty-six. This patient presented the symptoms of pelvic inflammation on entering the hospital. The cause was probably gonorrhœa, but the duration of it was difficult to determine. She presented extensive indurations in the region of both broad ligaments. Under treatment that on the right diminished, that on the left remained. Upon opening the abdomen chronic salpingitis, periovaritis, and peritonitis were found on both sides. The left ovary was as large as a lemon, and was firmly bound to the pelvic wall and the broad ligament. The tube and ovary on the right were slightly attached to the posterior face of their broad ligament.

Removing all these pelvic viscera, the masses and indurations disappeared, and the mobility of the uterus was restored.

Case II.—M. M——, aged thirty-four. Miscarriage two years *previous*; after that, pain in the left pelvic region continuous. Examination showed a sensitive mass in the region of the left broad ligament. The uterus was drawn to that side, and its mobility lessened.

Upon opening the abdomen salpingitis, periovaritis, and peritoneal bands were found; the bands attaching the tube and ovary to the broad ligament.

With the removal of the tube and ovary the mass disappeared, and the mobility of the uterus was restored.

Case III.—M. H——, aged thirty-seven. This patient was treated for several years for chronic cellulitis in various hospitals. On admission she had the symptoms of pelvic inflammation. Examination showed a mass in

[1] Transactions of Alumni Association, Woman's Hospital, p. 80.

the region of both broad ligaments. Upon opening the abdomen chronic salpingitis with periovaritis was found, both tubes and both ovaries being bound to the posterior face of the broad ligaments, low down, by numerous and strong adhesions. With the removal of the tubes and ovaries the masses disappeared.

Case IV.—M. H——h, aged thirty-five. This patient had had two abortions, five months apart, between five and six years ago. Symptoms of pelvic inflammation were present since the last. Examination showed masses in the regions of both broad ligaments, extending to the lateral fossæ of Douglas. The uterus was retroverted and adherent to the pelvic floor. Upon opening the abdomen, chronic salpingitis and periovaritis were found on both sides, the tubes and ovaries being embedded in thoroughly organized new tissue. They were removed from the left side, but not from the right, the adhesions proving too strong. Examination showed that we had removed the mass on the left, but that on the right remained. But it was evidently due to the tube and ovary, and not to any thickening of the tissue of the broad ligament.

Case V.—S. D——, aged twenty-five. This patient had an enlarged and tender uterus which was retroverted. I used the sound several times in order to replace it before applying a pessary. After the last of these efforts she developed a mass on the right side of the uterus in the broad-ligament region, which was very sensitive. Nothing distinctive was found on the left side. With its appearance she complained of the usual symptoms of pelvic inflammation. A month's treatment diminished the mass slightly and relieved the symptoms, but as she clamored for an operation, I opened the abdomen and found the following conditions: On the right side a dilated tube with swollen walls. Its cavity contained a starchy, muco-purulent fluid. It, together with the ovary, was covered with recent lymph, and they were bound loosely to each other, both being attached to the posterior face of the broad ligament. There was no fluid exudation at that time, all that was present being recent lymph, some portions of it having attempted organization.

The left tube was dilated, its cavity containing the same kind of fluid as that found in the right. Upon this side there was but slight evidence of peritoneal exudation. Both ovaries showed periovaritis; the left but little; the right extensive implication. In this one the evidences of inflammation extended even to the cortex of the organ. It was enlarged as a whole. After both tubes and both ovaries had been removed, all trace of the mass previously found by vaginal examination disappeared. Here we have an admirable case for testing the reality of the condition known as cellulitis, for every symptom and every sign were identical with those given as dependent upon that disorder.

I class the case now as one of acute salpingitis—one, therefore, which no doubt would have recovered if its course had not been interrupted by an operation.

Case VI.—L. D——, aged twenty-eight. This patient came into the hospital with the symptoms of pelvic inflammation. Examination showed a mass in the region of the right broad ligament. Under treatment, this so far subsided that nothing remained of it but some obscure thickening of the tissues and a little sensitiveness to pressure. Leaving the hospital at the end of six weeks, she returned again at the end of six months. The sensitiveness had increased somewhat, and the thickening in the region of the base of the right ligament was more prominent. The abdomen was opened and the right tube and ovary were found diseased and adherent to the broad ligaments. (Chronic salpingitis, peritonitis, and periovaritis.) After the removal of this tube and ovary and the tearing up of the peritoneal bands, the thickening disappeared.

Case VII.—R. H——, aged thirty-nine; pelvic pain for years. On this account she had become an opium-eater. Examination showed induration and thickening in the regions of both broad ligaments, with exquisite sensitiveness. Upon opening the abdomen, chronic salpingitis, peritonitis, and periovaritis were found on both sides, the viscera being attached to the posterior face of the broad ligaments. With the removal of the tubes and ovaries the thickenings and indurations upon the two sides disappeared.

Case VIII.—A. L——, aged twenty-nine. This patient contracted gonorrhœa from her husband some years before admission to the hospital. She had been suffering from pelvic pain for three years. Examination showed sensitive masses on both sides of the uterus in the regions of the broad ligaments, the largest being on the right side. Upon opening the abdomen, chronic salpingitis, periovaritis, and peritonitis were found on both sides. Tubes and ovaries were attached to the posterior face of the broad ligaments by many adhesions. After the removal of these organs the masses could not be found.

Case IX.—P. G——, aged twenty-one. Constant pelvic pain for one year. She attributed it to the wearing of an ill-fitting pessary. A sensitive mass was found in the right broad-ligament region. Upon opening the abdomen chronic salpingitis, periovaritis, and the remains of a peritonitis were found. Tube and ovary were attached to the posterior face of the broad ligament. After the removal the mass disappeared.

Case X.—K. D——, aged twenty-five. This patient gave the history of frequent abortions. For two years she has suffered from constant pelvic pain. A small sensitive mass was discovered in the region of the left broad ligament. Upon opening the abdomen, hæmatosalpinx, the end of the tube being closed, periovaritis with atrophy of the organ, and the remains of peritonitis were found. The tube and ovary were attached to the posterior face of the broad ligament by new tissue. The upper border of the broad ligament was shortened. After the removal of the tube and ovary the mass disappeared.

Case XI.—O. S——, aged twenty-six. She had had several abortions. After the second or third, she could not recall which, she had an attack of pelvic inflammation. From that time to date she has suffered from constant pelvic pain. Examination revealed sensitive masses on both sides of the uterus in the broad-ligament regions, the largest on the right side. Upon opening the abdomen chronic salpingitis, periovaritis, and the remains of peritonitis were found, the conditions being best marked on the right side. The tubes and ovaries were adherent to the posterior face of the broad ligaments. After their removal the masses disappeared.

Case XII.—M. T——, aged twenty-four. This patient gave the history of frequent attacks of pelvic inflammation extending over a period of four years. She traced them to her last confinement. Examination showed sensitive masses on both sides of the uterus in the broad-ligament regions. Upon opening the abdomen chronic salpingitis, enlarged ovaries, and the remains of peritonitis were found. After the removal of the tubes and ovaries the masses disappeared.

Case XIII.—E. M——, aged twenty-seven. For three years had suffered from constant pelvic pain. The originating cause was obscure. Examination showed the uterus retroverted and bound down, and sensitive masses on both sides in the broad-ligament regions. Upon opening the abdomen, the uterus, the tubes, and the ovaries were found to be firmly bound to the pelvic floor by well-organized adhesions, the tubes and ovaries being likewise firmly attached to the posterior face of the broad ligaments. With much difficulty they were removed, the uterine adhesions being torn up at the same time. The masses could then no longer be found.

Case XIV.—A. W——, aged thirty-eight. This patient had suffered from pelvic pain for several years. The originating cause was obscure, but it seemed to have been

due to pelvic inflammation induced by treatment for posterior displacement of the uterus. Examination showed that the uterus was retroverted and bound down. Sensitive masses were discovered on both sides of the uterus in the broad-ligament regions. Upon opening the abdomen, the remains of pelvic peritonitis were evident. The uterus was fixed in the cul-de-sac. Chronic salpingitis and periovaritis were present on both sides, the tubes and ovaries being attached to the posterior face of the broad ligaments, but not to the pelvic floor.

The adhesions binding down the uterus were separated and the tube and ovary upon the left side removed, after which the mass upon that side could no longer be felt. The appendages upon the right side were not disturbed, owing to the accidental wounding of a vessel close to the uterus. There was prolonged and very troublesome bleeding. By the time this was controlled I did not think it wise to further prolong the operation, the patient's condition forbidding it. This case afforded me an opportunity to study the behavior of an inflamed tube after the adhesions binding it down and crippling it had been torn up. I carefully freed the right tube and ovary from the adhesions binding them to the posterior face of the broad ligament, and satisfied myself that they, as with the appendages on the left, represented the mass felt in this region through the vagina. I used a drainage-tube, as there had been a good deal of manipulation in the pelvis. This served the additional purpose of keeping the uterus forward.

The patient remained in the hospital nearly two months, and when I examined her just before her departure I found both sides of the uterus free from the masses, and from sensitiveness as well. The permanency of the improvement upon the right side is to be determined by time. But if salpingitis and peritonitis were the result of a retroversion, the correction of the latter in the manner employed in this case, together with the treatment of the tubes after the fashion employed with the right, might be found not only safe, but complete and satisfactory. Upon this subject I hope soon to present further observations. I will merely say here that I am convinced that the only reliable treatment for a displaced and adherent uterus is to be found in abdominal section. Whether the appendages are to be removed in all these cases is, in the light of this case, to me, an open question as yet.

Case XV.—A. H——, aged thirty-three. The patient gave a history of pelvic inflammation extending back to a miscarriage one year ago. She had been coming into the city from one of the suburbs for treatment. This involved a good deal of effort and some exposure, and coming, as it did, not only before, but after the treatment, was no doubt the immediate cause of the attack which brought her into the hospital. Be that as it may, when admitted she had the symptoms of acute pelvic inflammation.

The uterus was fixed at about the centre of the pelvis, and was anteverted. In the region of both broad ligaments and behind the uterus there was a solid mass of indurated and very sensitive tissue. The whole of the posterior half of the pelvis appeared to be filled in with inflammatory material.

When I opened the abdomen the following conditions were found to exist: The uterus was placed as described. The sigmoid flexure was attached to the fundus, and extended thence along the upper border of the left broad ligament to the pelvic wall. The uterus, with its broad ligaments stretching straight from it to the pelvic walls, divided the pelvis into two halves about equal. The posterior half was filled with exudation, formed and fluid, with enlarged and infiltrated ovaries, and with dilated tubes containing pus, that on the left being the larger. The fluid portions of the exudation were in parts purulent. This entire collection was roofed over with organized new-tissue, which extended from the fundus of the uterus and from the upper border of both broad ligaments backward to the posterior pelvic wall, striking it about one-third the way down. The rectum and sigmoid flexure were involved in this mass, but the coils of small intestines lay upon the roof of the tissue mentioned, free from every implication. The purulent portion of the exudation occupied the cul-de-sac of Douglas. In it was found the extremity of the left tube, but the opening into the tube was closed by recent lymph.

After much effort the left tube and ovary, together with all the fluid and some of the organized exudation, were removed. The tube and ovary on the right side could not be taken out. The result was this: Nothing remained of the mass felt through the vagina except a small mass in the region of the right broad ligament. This was clearly the tube and ovary on that side, as they were attached to the posterior face of that ligament. The left broad ligament and the regions posterior to the uterus were free.

This evidently was a case of pelvic abscess in an early stage, the point of origin having been the left tube.

Case XVI.—M. B——, aged twenty-three. She gave the history of pelvic inflammation extending over several years. The origin appeared to be in a miscarriage four years before entering the hospital.

Examination showed hard, sensitive masses in the regions of both broad ligaments, together with some sensitive induration in Douglas' cul-de-sac.

Upon opening the abdomen, chronic salpingitis, periovaritis, and peritonitis were found on both sides.

The mass in Douglas' cul-de-sac was composed of the end of the right tube, which was firmly bound to the posterior face of the lower part of the uterus. The remainder of that tube, the left tube, and both ovaries were firmly attached to the posterior face of their respective broad ligaments. There was no thickening of either of these ligaments, nor any masses within their basic lines. The diseased viscera were so firmly attached in their different locations that it was impossible for me, with safety, to do more than remove a portion of the left tube. The masses therefore remained, but digital examination showed them to be made up of the tubes, ovaries, and peritoneal adhesions, the cellular planes being free.

Here, Mr. President, I must end my argument.

I am aware that while it may be thought conclusive as to the first proposition it may be deemed deficient as to the second. To this I must answer: If we admit the first, we virtually concede the second. On taking up this subject it was my intention to end it here, but further consideration induced me to proceed and aim at some practical deductions.

I will offer no apology for the observations which are to follow, observations which some may consider premature. First, because I am convinced of the correctness of my position; second, because I feel that the time has come when everyone who has facts with which to back his beliefs should not only present them, but should be willing to aid in working out the conclusions to which they point.

Having this object before me, I now pass to a hasty review of the pathology, etiology, symptoms, prognosis, and treatment of these tubal products.

First as to the *pathology*.

Acute stage.—The tumors themselves are made up of tube, ovary, and exudation; sometimes a coil of intestine is included, perhaps the omentum.

These masses of tube, ovary, etc., are, as a rule, attached to the posterior face of the broad ligament, sometimes well up, again low down, but may also be in direct contact with the uterus, attached to its side, or posterior face; sometimes in as close contact with the latero-posterior aspect of the pelvic wall, a free space existing between the mass and the uterus; then, again, you may have the entire region posterior to a broad ligament, from the pelvic floor to the brim, filled with the mass; these may be single, on but one side, but quite often they exist on the posterior face of both broad ligaments, and if extensive, by coalescing they may fill the whole of the pos-

terior portions of the pelvis. When they are small, the uterus is but slightly displaced; forward, if the masses are double; to one side, if single—that is, to the side opposite to that occupied by the mass. This displacement is in direct proportion to the size of the mass. A single tumor may so fill one side of the pelvis as to force the uterus completely to the opposite side, but always canting it forward to some degree.

In case the masses are on both sides and are large, the uterus is carried directly forward, the amount of displacement being directly proportioned to the size of the mass. It may fill the entire pelvis, crowding the uterus and broad ligaments against the anterior wall of the pelvis, or forcing them down upon the vesical and paravesical regions, the uterus being in a state of complete anteversion. This condition gives you the impression that the uterus is enveloped by the inflammatory mass. There is one peculiarity of these displacements which is worthy of notice, namely, that the uterus as a whole is pushed not only out of position horizontally, but is likewise pushed downward. Whenever the posterior half of the pelvis is thus completely filled, the calibre of the rectum will be encroached upon, a fact which demonstrates itself clinically by the constipation and tympanites present in such cases. In the formative or acute stages of these masses you will find an abundant supply of serous exudation filling the interstices between and about the viscera implicated, and this exudate is responsible for the boggy sensation first given the examining finger, and for the size and smoothness of contour presented a little later. This inflammatory mass not only contains, but is surrounded by, organized lymph thrown out by the implicated peritoneum.

The exudation at the periphery serves to circumscribe the mass, and thus stands as a barrier between the central inflammatory nidus and the general peritoneal cavity. Sometimes this proves ineffectual, and then to the picture heretofore confined to the pelvis we have general peritonitis added. Entering the mass, we find the evidences of inflammation best marked about the fimbriæ of the tube, or tubes, from where it can be traced directly into their cavities. A word in reference to the exact condition of these tubes. The walls are thickened from inflammation and infiltration. As a rule they are dilated; sometimes to the dimensions of the small intestine, but generally to a less degree. The distention is, of course, greatest in the infundibular portions. In view of the fact that the end of the tube represents the centre of the extra-uterine inflammation, it is of importance to see just how it is placed. Its normal position is in fairly close relation with the outer and posterior aspect of the ovary, thus about midway the posterior face of the broad ligament, but this is subject to many variations, usually the result of inflammatory process. Be this as it may, we find the end of the tube in the inflammatory mass under consideration, the ovary, as a rule, being close by. But it may be attached to the pelvic wall, to the floor of the pelvis, to the brim of the pelvis, to the side of Douglas' cul-de-sac, to the rectum, to the sigmoid flexure, to the cæcum, to the posterior face of the broad ligament, to the uterus, and even to the bladder. Thus we see that while the centre of the intraperitoneal inflammation generally is the posterior face of the broad ligament, and is in immediate relation with the ovary, it may occupy a number of widely separated points.

The attachments at the pelvic brim, and even in the iliac fossæ, would seem to be confined to cases in which the uterus is enlarged to a considerable extent, though in one of my observations this was not the case, it being of about normal size.

If we see the tubes while in this, the acute stage of inflammation, the usual evidences of inflammation of a mucous tract will be noticed, and these evidences can be traced into the uterus to its mucous membrane. The tubes will be distended, and there will be fluid in them proportional to the amount of distention, and this fluid will vary in its appearance, and even position, according to the nature of the inflammation coming from the uterus. If that be infectious—as, for instance, in gonorrhœa or septicæmia—it will be more or less distinctly purulent; if, on the other hand, the inflammation be non-infectious, it will be muco-purulent, or chiefly mucous. This fact, the distention of the tubes, and the muco-purulent character of the contained fluid in this the acute stage of the pelvic swellings under consideration, is of importance in its bearing upon the question of treatment. The amount of tubal distention would seem to depend upon the perfection of the closure of its outer end.

The ovary may be said to be always implicated in this peritoneal inflammation, the fimbria which attaches it to the tube forming a ready transmitter of the process from the tube; but the extent to which it is involved must depend upon its proximity to the tubal opening and upon the degree of the inflammatory process. The limits of this paper will not permit more than a passing allusion to the changes effected in these organs in any stage of the inflammatory process. They suffer but little in the early stage, the changes being most marked on the capsule. This is covered with lymph or pus, as the case may be; and if the septic element largely predominates in the inflammation, the organ as a whole will be softened and the lymphatics leading from it will contain purulent lymph. As briefly as possible I will now trace the sequences of this the acute stage of these inflammatory masses.

Chronic stage.—What are the after-effects? This question resolves itself, first, into the consideration of the subsequent course of the inflammatory process, and, next, its effect upon the organ involved.

As to the subsequent course, this differs in no essential from inflammation of other structures and surfaces, and depends upon the state of the general health and the nature of the infecting element. We have:

Resolution, organization, and suppuration.

It is doubtful if the effects of a peritoneal inflammation ever disappear entirely, the peritoneum in this respect resembling the pleura. Still, in the lesser forms, nothing may remain but some thickness of the membrane. On the other hand, numerous dense and extensive adhesions and thickenings may result.

Lastly, suppuration may take place and an abscess be formed. Now just here let it be understood that the evidence of frequent suppuration in these masses is abundant, and it is clear that the purulent collection may be without the tube, the tube opening into it, or entirely within it; but in general it appears that even when within the tube its outer wall is either some one of the pelvic viscera, usually the ovary, or else some part of the pelvic wall or floor. I could cite numerous recorded cases to prove this. I will, by way of illustration, mention three that have recently come under my observation.

Case I.—W——. November, 1885. Right tube the size of a large walnut; the fimbriated end adherent to the pelvic wall just behind the spine of the ischium. Pulling it from this attachment the cavity of an abscess was opened. The wall of this cavity was made up chiefly of the outer expanded end of the tube, but the pelvic wall at the point of adhesion formed a part of it. The peritoneum at that point was eroded, showing that perforation in time might have occurred.

Case II.—A. W——. March, 1884. A fistulous opening just below Poupart's ligament on the right side; another lower down on the inner side of the thigh.

These sinuses unite on the surface of the psoas magnus muscle just above Poupart's ligament; from that point a single sinus extends to the brim of the true pelvis; there it passes into the cavity of the right Fallopian tube, whose fimbrated end is here closely united to the brim by adhesions. The cavity of the tube and the cavity of the uterus are freely communicable.

Case III.—In the report of Fleetwood Churchill, be-

fore quoted, a similar case is mentioned, on the authority of Mr. Lee.

CASE IV.—Case XV., already recorded in this paper, is a fourth illustration of the method of the development of an abscess in this condition.

These cases are very suggestive as to the termination of tubal and intraperitoneal purulent accumulations, and point distinctly to the following: Given a salpingitis and peritonitis which goes on to suppuration, the location, and sometimes the direction of exit, of the pus is determined by the location of the extremities of the tubes. Now bear in mind the varying positions in which those extremities have been found, and we see that such abscesses may be found originating low down in the pelvis, or high up, even at the "brim," or in contact with some of the viscera, the ovary being the part generally involved. My observations have led me to the following conclusions as to the course of the pus: In the majority of instances it makes its way downward, and finds exit through the vagina most frequently; next, through the rectum. But it may take a course heretofore regarded as belonging to psoas and parametric abscesses—*i.e.*, through the anterior abdominal wall, above Poupart's ligament or below it on the thigh, and it may escape through the gluteal regions or into the peritoneal cavity. I will not detain you longer with further accounts of the results of these cases of purulent salpingitis, for there is nothing in the history of purulent accumulations in the peritoneum, arising from other sources, to invalidate the conclusions. My object is to bring forward distinctly the causative relation of salpingitis to these abscesses. There is one matter, however, worthy of consideration, namely, that it is possible and probable that some of these abscesses of tubal origin may have as their most extensive bed the cellular tissue about the uterus, in the broad ligament, or at the pelvic floor, being therefore extraperitoneal. The suppurating tube becoming attached at or near to the pelvic floor, as in the Cases I. and IV., or to the lower section of the posterior aspect of the broad ligaments, both common occurrences, perforation of the serous membrane and invasion of the cellular planes is a step easily taken.

Once there, the pus may wander in any of the directions that a collection primarily cellular may take.

For these reasons, then, I do not consider that any report upon the point or origin of a peri-uterine collection of pus (pelvic abscess) can be complete without a clear statement as to the position and condition of the fimbriated end of the tubes, no matter whether these abscesses be peritoneal or in the cellular planes.

From this it will be seen that it is not necessary to limit the abscesses of salpingitis to such as can be imprisoned beneath the broad ligaments of a retroverted uterus. Such abscesses can form in the peritoneal cavity, no matter whether the starting-point—the end of the tubes—be below or above these ligaments, in this respect resembling the behavior of an extra-uterine pregnancy.

As to the ultimate effect upon the organs involved. In this I will be as brief as possible, referring anyone who may care to look more deeply into the matter to the admirable monograph upon the subject of pelvic peritonitis by Julius Heitzmann, of Vienna.

The changes wrought in and about all the involved viscera are as varied as are the degrees of the inflammation. As already said, nothing may remain to show that inflammation has existed but some slight thickening of the peritoneum about the tubal extremity. On the other hand, dense masses of new tissue may be left, which for years distort and imprison the various organs.

First, as to the tubes. *They may escape any permanent injury. Their position and form, and the condition of all their coats—serous, muscular, and mucous—may present nothing abnormal, unless it be some slight thickening of the fimbriæ.*

Then, again, they may be occluded, thickened, distorted, dilated, and bound to one or more of the adjacent viscera, to the posterior face of the broad ligament—their usual position—to the pelvic wall, or to the floor. Then they contain mucus or a muco-purulent fluid, a clear serous or a bloody fluid.

The ovary may be unaffected; but, again, it may be embedded in masses of tissue and clearly atrophied. Between these two extremes are many varieties of changes, but they are mainly thickening of the capsule and increase of the connective tissue, the result of the periovaritis. The so-called cystic degeneration may exist, but whether this be secondary to the periovaritis, which is a part of the pelvic inflammation, or due to independent changes in the Graafian follicles, I cannot say. The evidence points to an origin independent of salpingitis and peritonitis. One of the most interesting points in this subject is the result to the ovaries. Certainly in a large number of cases these organs are left in excellent condition, and just so long as any portion of the parenchyma is normal, that portion at least can perform the function of ovulation; and when we remember how small a portion may contain large numbers of Graafian follicles, it would seem that the ovary might undergo considerable change without destroying its ova-producing power.

I cannot banish the belief that there is no more reason for destruction of the ovary because of salpingitis and peritonitis than there is for destruction of a testicle because of epididymitis with inflammation of the tunica vaginalis; and yet it is to be borne in mind that permanent obstruction of the Fallopian tubes is the equivalent of destruction of the ovaries, so far as childbearing is concerned. In studying the results to the uterus, it should be understood that with the disappearance of the acute stage of the pelvic inflammation this organ, which has been displaced in one direction by the pressure of the masses of exudation, is now displaced in the opposite by the contraction of the same exudation, now diminished in bulk and organized. This is the case except in those instances in which the new tissue has extended far enough to bind the uterus in the position first given it. The mobility of the organ may not be interfered with if the inflammatory remains be slight, but if they are at all prominent it is fixed in direct proportion to the extent and length of the adhesions.

The uterus may then be retroverted and bound down—attached to the rectum and in the cul-de-sac—and this is rather a common pathological condition. It may be thrown into a position of anteversion or lateral anteversion by shortening of both, or one, of the utero-sacral ligaments. Another common displacement is the lateral one, dependent upon shortening of the broad ligaments, the fundus being the portion chiefly affected if the contraction be along the upper border, the cervix if it be along the base.

The condition of the structure of the organ is apt to be decidedly abnormal if with these displacements the tubes are in a state of chronic inflammation. This is most often seen in the retroversion. You have the body enlarged and sensitive, and from the cervix a purulent or muco-purulent discharge escapes.

The ligaments rarely escape some damage; they may be infiltrated, distorted, and shrunken, the condition of necessity exercising a decided influence upon the position and mobility of the uterus, as has already been pointed out.

With the uterus in a state of complete retroversion, or even flexion, it is possible for the posterior face of the broad ligament to become adherent to the pelvic floor, thus encapsulating the tube, but I cannot say that I have seen this often. When the inflammation is extensive about the rectum and dense masses of tissue remain, that viscus is constricted. I have seen three cases in which the calibre of the gut was narrowed to about the size of the index-finger; fortunately this is not often present. In one of my operative cases I found two cysts about as large

as a walnut situated in the meshes of the new tissue—a condition often noticed by others.

The picture here presented of salpingitis and its results is a varied one, but the graver lesions described are fortunately in the minority, the milder ones being those presented in the majority of the cases met with. It will be observed, Mr. President, that I have made no mention of those cases of pyo-, hydro-, and hæmato-salpinx in which the disease is confined to the tubes. This I have done purposely, for the reason that the condition is rare and is more likely to be confounded with hypertrophied ovaries and with beginning par-ovarian cysts than with the condition heretofore described under the heading of "Pelvic Cellulitis."

The *Etiology* of salpingitis and its peritoneal and visceral results centres about the inflammations of the inner lining of the body and neck of the uterus.

I know full well that several observers have claimed that even tubal inflammation, such as we see in post mortems, is the result of cellulitis, the process passing from the peritoneum to the tube, or from the ovary to the tube. To make this clear, the absence of an inflammation continuous from the mucous lining of the uterus to that of the tubes must be shown in cases of salpingitis, otherwise we are forced to the conclusion that these observers have reversed the current of the pathological sequences.

The line of propagation is undoubtedly a direct one from the mucous membrane of the uterus to that of the tube. The degree and character of the uterine implication determines, no doubt, the degree and character of the tubal and peritoneal inflammation, both, as in all tissues, being governed to a large extent by the conditions of the general system. Every patient, therefore, who has an endometritis, no matter how produced, has taken the first step toward a salpingitis and its results.

The *Prognosis* in this disease is a subject worthy of the most earnest study, for the reason that in the light of the brilliant success now obtainable in abdominal surgery there revolves about it the question of removing the tubes and ovaries—a mutilation to be avoided, unless imperatively demanded in the interest of the life and health of the sufferer.

If I have succeeded in establishing the identity of salpingitis and its results with the so-called pelvic cellulitis, we must admit that death is an exceptional result of this disease. It may be expected whenever evident septicæmia is at the bottom of the inflammation, or whenever a depraved constitutional condition is present, because in such a presence acute general peritonitis is apt to develop.

Pelvic abscesses are by no means an uncommon sequence, but, even with this, recovery is the rule—death, when it does come, being the result of pyæmia, of prolonged suppuration, or of acute general peritonitis. It is evident, then, that the large majority of cases of salpingitis and peritonitis do not die. But what is the ultimate effect of the disease upon the health and comfort of the individual? Experience shows that the majority of the cases get well, many getting so well that they not only suffer but little inconvenience, but are able to bear children subsequently. This is within the experience of everyone practising in the departments to which the disease belongs.

The "cure" is indicated by the disappearance of the pelvic indurations, but especially by the freedom of the patient from pelvic pain, backache, and endometritis, and the return of a menstruation such as is normal. If the masses remain after six or eight months' treatment, the "cure" of the patient is very doubtful, in spite of the fact that some such cases will, for years, experience but little discomfort. So long as the indurations remain, so long as there is tenderness about the uterus and the organ is not freely movable, the disease is present; and, upon provocation, is liable to spring up to its original dimensions, and go even beyond into the domains of danger and death. It is in these cases that we usually find sterility established as a permanency. They are instances of chronic salpingitis and peritonitis, with an implication of the ovary, usually in the form of peritonitis. Heretofore I have known them and described them as instances of "chronic cellulitis."

The symptoms and signs.—Believing that I have succeeded in establishing the relation between the disease of the tubes and the pelvic masses or indurations in question, I need not waste your time in discussing this part of the subject. I need merely refer you to the symptoms and signs set down in any recent work on pelvic cellulitis and pelvic peritonitis, asking you to bear this in mind—that whenever the symptoms and signs of septicæmia are unmistakably present, you must be prepared to recognize the possible existence of a primary cellular inflammation; but in the absence of such distinct symptoms and signs, to doubt its existence; and, granting its existence in any given case, never to lose sight of the fact that an inflammatory mass about the lateral or posterior aspects of the uterus is much more quickly produced by a salpingitis than by a cellulitis, so that even in the presence of septicæmia such masses are far more likely to be the result of the former than of the latter.

Touching the symptoms and signs of chronic cellulitis and peritonitis, they, with unimportant changes, should be labelled, "the symptoms and signs of chronic salpingitis and peritonitis." The question of the recognition of a cellular abscess versus a tubal or peritoneal abscess depends upon the close study of the antecedent history, but as the indications of treatment are the same in both we can afford to ignore the differentiation.

The treatment.—I have nothing new to offer you upon this subject. I only wish to reconcile differences. He who believes in the cellular origin and location of these evidences of inflammation inveighs against him that believes in their tubal origin, while he of tubal proclivities makes answer by showing the dilated, infiltrated, and pus- or muco-pus-containing tube. This may be a sufficient answer so far as settling the question of location of the inflammatory mass goes. But do all the advocates of tubal extirpation answer so well the next criticism of the opponent, namely, "If the cases which you show me in your wards and on the operating-table are cases fit for tubal amputation, how is it that so many identical cases get well in my hands?" Here the issue is now joined, and it is in the interest of progress that I have tried to show that there was a mutual misunderstanding.

The cellular advocates are wrong in their pathology and half right in their treatment. The tubal advocates are right in their pathology, but are half wrong in their treatment. The first is too little of a surgeon, the second is too much. I cannot answer for other countries, but in our own I am sure that the one permits many a woman to suffer, and perhaps die, who can only be relieved by the knife, while the other cuts too freely. A dilated tube with a cavity filled with fluid is his sufficient answer; but he fails to note the distinction between acute salpingitis and chronic salpingitis, and looses sight of the fact that the first and even the second may often be cured by simple methods—sacrificing, therefore, many tubes and ovaries which might better be left in place.

These two conditions are distinguishable, not only after opening the abdominal cavity, but before. *After*, by looking for the evidences of recent inflammation just described in the section on pathology. Before opening the abdomen, by a study of the patient's antecedents; for instance, the history of recurrent pelvic inflammation, or of constant pelvic pain, extending over a period of months or years, and associated with sensitive, indurated masses about the uterus, the mobility of the organ being lessened, are conclusions of chronic salpingitis. Rectal and vesical disorders being excluded, even less distinct evidences, provided they are associated with such a history, would be conclusive. But the *recent* development of a mass about the uterus in connection with any of the

causes known to produce salpingitis, and associated with pelvic tenderness and lessening of the uterine mobility, is to be regarded as the indication of acute salpingitis. The records of the dead-house and the bedside show conclusively how largely in the majority the cases of recovery in salpingitis are. It behooves us, then, to be slow in laying operative hands upon these tubes. In acute cases never, unless to cut short a peritonitis that threatens to become general; but in chronic cases, whenever other measures have been *faithfully* tried and found wanting, every patient should be offered that measure of relief that surely can be gotten from abdominal section.

In the interest of conservatism, let us hope that this will not always mean extirpation of the tubes and ovaries, for who can say that the abdominal surgeon may not devise means by which those organs may be so treated as to secure health without always robbing of the possibilities of maternity. Some recent work of my own in that direction encourages me to think that this may yet be an accomplished fact.

Conclusions: Salpingitis is not a new disease, nor a rare disease. It is, with peritonitis, the most common form of inflammation about the uterus, holding in point of frequency about the same relation to the extra-uterine surface that endometritis does to the intra-uterine. The majority of the cases get well. A minority do not, and these are capable of causing such danger and distress that abdominal section, with removal of the tubes and ovaries, becomes a necessity.

THE RADICAL TREATMENT OF VARICOCELE.

By E. L. KEYES, M.D.,
NEW YORK.

In The Medical Record of February 20, 1886, I published a short article upon the treatment of varicocele, advocating the subcutaneous application of catgut.

During March and April, while in England, I was impressed by the impunity with which Mr. Lawson Tait seemed to use silk for all purposes. He assured me that he was in the habit of having his ligatures at the bottom of ordinary wounds disappear without giving him any trouble. I can only vouch for this statement, not for the fact, since I had no opportunity of observing it. Mr. Tait seems to prepare his silk in simple hot water.

I determined to try silk in varicocele. On my return to this city in April, I operated, for the first time with ordinary twisted surgeon's silk, rather fine. I prepared, it by boiling in simple water, and carried it to the hospital in a bottle full of alcohol and bichloride of mercury, one in one thousand.

The case was a very bad one, the veins large, the tissues lax and pendulous, the patient anæmic and feeble. I operated as already detailed in The Medical Record, February 20th. My patient had not a bad symptom, got up at the end of the fifth day, and left the hospital on the sixth day. I have seen him recently, three months after the operation. A solid cord replaces the site of the former wormy bunch of veins. The veins are patulous below, but shrunken, and the patient has lost the discomfort and dragging pains formerly complained of.

I have operated since the middle of April upon five cases with silk, my house surgeon at Bellevue, Dr. Mitchell, upon two. My patients remain in bed five days, and always leave the hospital at the end of the week. No dressing is made, the testicle being simply supported upon a piece of rubber plaster passed across the thighs beneath the scrotum. Sometimes an anodyne for a couple of days is required, sometimes a laxative. I have never used an anæsthetic, except sometimes a local injection of cocaine hydrochlorate at the time of operating. I have never seen a bad symptom, never a drop of pus. Whether the silk is absorbed or not I do not know; certainly the small, hard lump remains about the cord more than three months, gradually growing smaller, and painless.

One strong incentive which caused me to experiment with silk was a letter from a physician, one of my catgut operations, received in April, which informed me that he feared that the vein tied with catgut had in his case again become pervious. I think this may perhaps occur in some cases after catgut, but believe it impossible if silk is used.

I have modified my needle, the one I now use being figured herewith. The front eye carries the ligature; the loop of silk passes through the other eye and is held tense over one of the steel buttons in the handle of the needle.

I see in Bell's article in the "International Encyclopædia of Surgery," vol. vi., p. 589, which appeared in June of the present year, that Mr. Barker[1] has used silk antiseptically applied through a puncture made by a knife. The silk is cut short and left in. He dresses with salicylated wool and reports that his patients have no suppuration and leave the hospital in "ten days or a fortnight." This method seems less good and less speedy than the subcutaneous application of silk by the aid of a needle.

How long silk has been used subcutaneously and by whom it was first employed in this manner for the cure of varicocele, I cannot say. It is quite possible that the practice is very ancient, but I had not heard of it when I began to use silk.

That it has been so used since January, 1878, is proved by a short article[2] in the August number (1886) of the *Annals of Surgery*, from the pen of Mr. Ogston, of Aberdeen. I received this journal to-day, August 9th. He uses carbolized silk, dresses for three days with salicylic wool, and says that "at the end of three weeks the patient can safely walk about, using, however, a suspensory bandage, and being careful to avoid strain, pressure, or fatigue of the part."

1 Park Avenue, August 9, 1886.

TREATMENT OF INEBRIETY.

By C. F. BARBER, M.D.
FORT HAMILTON, L. I.,

In reviewing the subject of my heading, I am struck with the fact that there seems to be a want of harmony existing between the many authorities writing upon it. Some seem to be in doubt as to the way in which this disease should be handled, while others mark out for us an explicit course to follow. Bearing these facts in mind, I deem it not presuming on my part to place before the readers of The Medical Record the course pursued in an institution where hundreds of addicted persons are treated yearly.

In the first place, it is with much reluctance that a patient will consent to enter an institution, nor, in many cases, will the friends of the patient take the steps to have the unfortunate victim placed where care and proper restraint can be exercised. It is then, I may say, with the inebriate proper we have to deal. It may be an old, steady drinker, or one who at intervals—at first months apart, now but a few days, or at longest a week or two—indulges in his uncontrollable dissipation.

I am sorry to say that in this country the amount of liquor consumed is surprisingly great, and many inebriates exist where we least suppose such a condition possible. I feel safe in saying that the American of the present day cannot, as a rule, use liquor without overstepping the bounds of propriety.

Unquestionably, the first procedure with these patients is to place them in as advantageous a position as circum-

1 Lancet, 1882.

2 Page 120.

stances permit; a place where restraint can be exercised, where their habits can be controlled, and where they may be supplied with the best dietary possible. Healthful sleep, regular meals, and abstinence from stimulating liquors are the great factors in restoring the shattered nervous system and failing bodily health.

When the physician is called, he does not find his patient in a state of sobriety, but suffering from the effects of a debauch; eating little or nothing, but stimulating instead, nervous in the extreme, with head throbbing, perhaps having hallucinations, the stomach irritable and unable to retain food, insomnia pronounced. We are advised by many to cut off the supply of stimulants at once, and by administering nervines to control the excitement, and tone the system by tonics. Theoretically this may seem correct, but practically I am certain it is unsuccessful. We are taught never to empty an overdistended bladder rapidly, but to allow a little urine to flow at a time, thus permitting the overtaxed muscles to regain their normal state.

If this procedure be scientific, as we know it is, why not allow this overtaxed system to gradually drift back to the normal condition by allowing a moderate supply of stimulants? Place two cases side by side, and to one administer nervines, tonics, etc., to the other allow a guarded amount of liquor, and I am certain you will not hesitate to agree with me in adopting the latter course. Permitting these cases a supply of liquor will, and has prevented many attacks of delirium. I do not, nor can I, think anyone will deny the utility of the bromides, chloral, opium—the latter especially—in delirium, when other means have failed to produce sleep. As to the kind of liquor called for in these cases, it is difficult to lay any special rules. Whiskey, administered in milk with an egg, is probably the best means of aiding the patient to recovery. Beer and ale I have seen produce wonderfully good results when all other means have failed. There occur cases where chloral has a tendency to produce excitability, and the bromides have little or no action; in such I have seen the fl. ext. piscidiæ erythrinæ and ex. hyosciami produce most excellent results. A purge will often relieve many disagreeable symptoms. To allay the irritability of the stomach we must keep the patient quiet, permit the free use of ice, but allow little water, cold water seeming to produce an increased desire to vomit. A glass of hot water will sometimes stop emesis. The usual sedatives may be given, but milk diluted with lime-water, and beef-tea or broths, given hot, are more liable to be retained than other forms of food.

So soon as the patient is able to retain solid food, stimulants may be lessened or abandoned. Tonics of quinia, gentian, nux vomica, or some of the preparations of iron, may be given with good results. We are asked as to the length of time a patient should remain in an institution. Experience, our best guide, has shown us the longer the abstinence the better the result. A good plan, which has been adopted by some with much experience, is to oblige a continuous residence of three months, after which the patient may be allowed to go and come at intervals, so long as he may continue to do well. Should he continue to be free from the use of stimulants for several months, it is fair to presume he is able to launch once more into the world. When injuries or diseases are the cause of an abnormal mental condition, we cannot hope for a good result until the cause is removed.

CAN A MAN HAVE A FEMALE COMPLAINT?—A young man entered the Dispensary of the Chicago Policlinic recently, and going up to the clerk held out one of the dispensary circulars, with the question: "Say! isn't this the hour for diseases of women?" The clerk answered in the affirmative, when the young man said: "Well! I've got a disease of a woman and want to be treated." —*Journal of the American Medical Association.*

Clinical Department.

ON THE TREATMENT OF SUMMER DIARRHŒA OF INFANTS BY ANTIFERMENTS.

DR. DOUGLAS MORTON writes: "For several years my management of the summer diarrhœa of infants has been based upon the belief (1) that in cholera infantum there prevails vaso-motor paralysis identical in character with that of sunstroke; (2) that this condition, involving more or less turgidity of the blood-vessels of the gastric and intestinal mucous membrane, and consequent abeyance or impairment of digestion, leads to fermentation of the ingested food; and (3) that the inflammatory phenomena that frequently occur in the course of these diarrhœas are attributable to the irritant action of intestinal contents in a state of fermentation. It has been shown that inflammatory lesions increase in frequency and intensity as the sigmoid flexure is approached. Practically, in all cases, the lower part of the colon is the seat of lesion; it occurs less often in the ileum, and is rare higher up. Bearing in mind that fermentative products increase in quantity and irritating qualities as the process advances and the intestinal contents are propelled in their course through the canal, these facts of pathology are just what would have been looked for.

"This simple view of the nature of the disease, in which the difference between the severest cholera infantum and the milder diarrhœas that occur in hot weather is regarded as merely one of degree, and in which entero-colitis is considered, at least in a great number of cases, a result of, or a stage in either manifestation, appears sufficient for the facts of the case. The assumption that has been made of a microbe of cholera infantum seems entirely unnecessary. The widely and densely diffused germs of the ordinary fermentations are taken in with the food, and, in default of an adequate supply of normal digestive ferments, they speedily begin their peculiar work of decomposition with the production of irritant matter enough to account for all local inflammation, and probably, through absorption, when this is possible, for general symptoms.

"In milder forms the dejecta are made up in large part of food in process of fermentation, and are consequently of acid reaction. In cholera infantum, on the other hand, the stools are alkaline, and this, doubtless, is due to the fact that the quantity of blood-serum poured into the canal from the turgid vessels of its walls is sufficient not only to neutralize all acid present, but to give an excess of alkali. In these cases the osmotic relations seem to have been brought into a state of unstable equilibrium, and there remains only the irritant effect of undigested and fermented food to precipitate a profuse discharge.

"It appears, therefore, that there are two indications for treatment which lead all others in importance. The first is to overcome that effect of heat by which the mucous lining of the alimentary canal has been brought into a state of congestion and consequent readiness for great and rapid loss of appropriated material. This indication is to be met in the main by measures for reduction of temperature. The second indication is to prevent fermentation; and since the question of diet has such important bearing on this point, I would like to impress the truth that food which fails to be digested not only adds nothing in the way of nutriment, but, by undergoing fermentation, becomes an irritant, and thereby causes a loss of already appropriated material. It therefore becomes sometimes an object of much importance in treatment to withhold food altogether for a considerable length of time.

"My purpose here is chiefly to emphasize the value in the treatment of this disease of agents that have the power of preventing fermentation. Until about three

years ago it had been my habit to use the milder antiferments in common use—as carbolic acid, hydrochloric acid, bismuth, chlorate of potassium, sulphite of sodium, and some others—and while using these I had never realized the importance of this part of treatment. Since that time I have been using two far more effective antiferments, nitrate of silver and bichloride of mercury, and have found that in many cases—perhaps the majority—to check and to prevent fermentation constitutes all the treatment needed. As to the comparative value of these agents I have not yet determined. My impression is, however, that when nausea and vomiting have been present the silver salt has given better results, but that generally the bichloride has been more useful. The dose that I ordinarily give of the former is gr. $\frac{1}{32}$ four or five times a day to a child one year old, dissolved in distilled water and largely diluted; and of the latter, gr. $\frac{1}{100}$, also dissolved in water to which has been added a little alcohol or aromatic tincture of some kind. There need be no fear that the bichloride given in doses amply sufficient to prevent fermentation will irritate the bowels, provided it be plentifully diluted with water.

"There may be diarrhœas in which it is well to give astringents, but I am quite sure they often do harm in the ordinary summer diarrhœa of children. Looseness of the bowels often continues for weeks after the acute stage passes off. In such cases I find an excellent remedy in the tincture of nux vomica, given in small doses—from a quarter to half a drop to a child a year old—every hour or two. This restores the lost tone of the arterioles throughout the alimentry canal, and greatly helps the enfeebled digestive powers. It is well at the same time to give pepsin with hydrochloric acid. There lies in one other drug, in considerable measure I believe, the power of counteracting the tendency in this disease to congestion of the abdominal viscera. This drug is belladonna. In cholera infantum I find it well sometimes to give hypodermatic injections of morphia, and give it associated with atropia in the tablet triturates so much used now. In the very minute quantity in which it is associated with the morphia in them, I find it sufficient to give decided color to the pallid face of a sick child, and, given alone in larger doses, I have seen it flush the face and neck with ruddy glow. In doing this it obviously draws a large amount of blood away from the internal organs."

A VEHICLE FOR QUININE, AND THE TREATMENT OF WHOOPING-COUGH.

Dr. F. A. Castle, of New York, sends us the following: "Dr. E. M. Lyon's recommendation of simple elixir as a vehicle for quinine (Medical Record, August 28th, p. 234) is open to the objection that the mixture of quinine salts with most sweet vehicles produces a worse-tasting compound than the quinine alone would be. The best vehicle for quinine is a solution of glycyrrhizin, and several formulas are in use among pharmacists for an elixir glycyrrhizæ comp. which serve to disguise the taste of quinine, as well as various other substances, much better than simple elixir. The glycyrrhizin seems to act by coating the crystals of the quinine salt, and for a few moments interfering with their solution. For this reason the elixir and the quinine should be prescribed separately, and their admixture be made just as they are about to be taken. A teaspoonful of the elixir, if well made, will disguise the taste of five grains of the sulphate of quinine quite perfectly, and nothing needs be taken afterward to remove any unpleasant taste.

"When quinine is taken in substance or in watery solution, and something is desired to dispel the bitter taste, I know of nothing better than a mouthful of soft bread. During service on a gun-boat in the Lower Mississippi I had abundant opportunities for trying a great variety of methods for administering quinine, and I never found anything equal in effectiveness or convenience to the chewing of a bit of bread-crumb. It seems to absorb the quinine and saliva from the surface of the tongue, and the impression upon the nerve-terminations lasts but a few moments after the morsel is swallowed.

"Respecting the treatment of whooping-cough by other methods, as referred to in the editorial article on p. 127 of The Medical Record for July 31st, I would like also to say that the value of cresylic alcohol (or cresol) is too little appreciated generally. By the aid of heat this substance is easily volatilized, and the air of a room may be sufficiently charged with the remedy to affect the respiratory passages. Since using cresol for this purpose I have rarely had occasion to resort to other measures, and nearly every case that I have treated with it improves rapidly as regards the severity of the paroxysms, the frequency of vomiting, the disturbance of sleep, and the amount of bronchitis. I have good reason for thinking that the duration of the disease is also somewhat shortened."

THE TREATMENT OF RHUS-POISONING.

Dr. R. G. Williams, of Whitney, Tex., writes: "While the subject of rhus-poisoning is under consideration, let me suggest a remedy which is certainly a specific, cheap, and found almost everywhere wherever the rhus grows. This remedy is more simple than bromine, does not cause any burning, stinging sensations such as are excited by the application of tinct. iron or spt. turpentine, and is more harmless than the corrosive sublimate. It is simply a strong decoction of the common cup-oak bark boiled to the consistency of tar, and applied by means of a camel's-hair brush or an ordinary brush or mop. It must be painted over the poisoned surface two or three times daily. Twenty-four hours' treatment is generally sufficient for a cure. This treatment is painless; the only unpleasant feature is the discoloration of the parts, but as this disappears in forty-eight hours it is really of no moment."

Dr. J. B. Kell, of Delphos, O., sends the following: "I desire to contribute my observations upon the treatment of this obstinate and exceeding painful cutaneous affection. I have been affected with the disease six times, the last attack occurring the past spring and being so severe as to render my features barely recognizable. As regards the treatment of my own cases, I have made use of many much-lauded applications, such as lead and opium wash, tincture of myrrh, and corrosive-sublimate solution, all of which certainly had a beneficial effect; but what I and the majority of sufferers have always desired is an immediate relief from the smarting pain and intense itching which are present. With me, none of the remedies I have made use of seemed to produce this anxiously hoped for relief, until I applied to the inflamed parts a saturated solution of potassium chlorate, the effect of which was extremely gratifying. The linen with which the remedy is applied need not be changed more than once an hour. In from twelve to fifteen hours the vesicles gradually disappear, the swollen part resumes its natural configuration, and life once more becomes enjoyable."

Dr. J. R. Flowers, of Columbus, O., writes: "I wish to add my mite to the therapeutics of ivy-poisoning. While camping out on Indian River, in North Michigan, during the summer of 1882, one of the ladies of our party was severely poisoned with ivy. An old native Indian gathered a quantity of boneset (*Eupatorium perfoliatum*) and, after pounding the tops and leaves to a pulp, applied it to the parts affected during the night. The next morning the swelling had all disappeared. Since that time I have used the fluid extract of the same for all my cases, and the result has been an immediate cure. Several of my medical friends have tried it, and the result has in every case been very satisfactory."

Dr. W. H. German, of Morgan Park, Ill., writes: "In the treatment of poisoning by Rhus venanata I have obtained better results from the use of the officinal gly-

cerite of tannin than from any other remedy. Applied freely every three or four hours it is promptly effective at any stage of the attack."

Dr. L. C. Winsor, of Spirit Lake, Ia., writes: "In an editorial published in the issue of July 31st, I see it stated that no internal treatment seems to be indicated in cases of dermatitis venenata. For a number of years past I have been subject, each summer, to attacks of that disease. When exposed to the rhus venenata I have found the numerous external applications to be of little benefit, except as palliatives. But during the last two years I have aborted several attacks in my own case, by the internal use of liq. potassi arsenitis, taken to produce its physiological effects. I have also had the same success in the cases I have had in practice. My experience, however, has been limited, and I desire to know if this remedy is reliable in this disease, or if my cases have all been of a very mild type."

TOY-PISTOL WOUNDS.

Dr. Robert T. Morris, of 945 Broadway, writes: "Dr. Powers writes on the above subject in The Medical Record for August 21st, and I should like to add a little testimony in support of his method of treatment. For a long time wounds made by blank cartridges gave me a good deal of trouble, and several of my cases developed cellulitis in the vicinity of the wound. When, after careful antiseptic dressing, one patient had tetanus and two or three had cellulitis, I decided to dissect out the whole region of the wound in my next case and find out if possible where the cause for the trouble lay. Shortly afterward a typical case came for treatment. There was the little dirty hole in the midst of a grimy palm, with just a suggestion of hemorrhage. The wound appeared to be quite superficial, and the probe would not enter the opening for more than one-eighth of an inch. Under strict antiseptic precautions I trimmed away the bruised skin and cut away a section of palmar fascia beneath, when, much to my surprise, a lot of felt wadding peeped up out of the hole. The wad, which had penetrated the palmar fascia as a small hard mass, had become swollen and infiltrated with blood until it would have filled a small thimble, and the elastic fascia had closed it in so completely that no one would have suspected its presence deep down in the hand. I opened the wound very freely and allowed it to granulate up from the bottom. Since that time I have treated a large number of blank-cartridge wounds of the palm, and have had no cases of wound-infection among them. Sometimes it was necessary to excise quite a large piece of palmar fascia in order to keep the wound open, and this was done in cases in which no wadding was found, because the minute grains of residue from burned powder often bruise the fascia and set up a low inflammation, which holds on in a discouraging way for weeks or months. The subject of blank-cartridge wounds is a very important one indeed, and principally because, as in sprains of the ankle, the injuries do not appear to require the radical treatment which is really necessary in order to insure recovery. The true character of the wound being recognized, the treatment is simple and effective."

ACUTE POISONING FROM SARDINES.

Dr. A. E. de Cailhol, of Los Angeles, Cal., referring to a case of poisoning from sardines reported in The Medical Record of August 7th, in which the writer asks whether the symptoms were caused by tin or ptomaines, reports the following case in answer to the question: "Ten years ago, when practising in St. Louis, Mo., I was called at night to treat a case similar to the one of 'M. C.' The symptoms clearly pointed to poisoning from copper. But there was no copper vessel in the kitchen. By very careful investigation and a great deal of talking with the mother, the only one of the family who was not ill, I obtained the following information: A week previous to the accident the father had had the fancy to eat sardines in oil; after having *completely detached the top* of the box and eaten two or three sardines, he ordered the remainder to be placed in the cupboard. On the evening I was called he asked for the sardines again, and the wife went for the box and placed it upon the table. The father divided the rest of the sardines between himself and his three children; the mother, in order that her children might have more, refrained from taking any. As she was the only one of the family not sick, of course I concluded that the sardines were the only cause of the trouble. *I asked* for the empty box and was told it was in the slop-barrel. I hastened to the back yard, and on the top of the barrel I found the tin box with some oil in it and the top with its label at the bottom of the box. My object was to analyze the remains; but, after examination at the light, owing to the oxidized condition of the copper label soldered on the loose tin top, I concluded that the case was one of copper poisoning. The copper label, having been in close contact with the oil and sardines for a week, had become covered with a coat of *vert de gris* which was perfectly visible on it, and, when soaked in oil and upon the sardines, had rendered the whole poisonous. I think the case of 'M. C.' had the same origin."

Progress of Medical Science.

Paresis of the Respiratory Muscles following Diphtheria.—Dr. Rothmann reports the case of a boy, seven years of age, who suffered from great difficulty of respiration following an attack of diphtheria six weeks previously. Inspection of the thorax showed the upper portion to be entirely without motion, and the lower ribs only rose and fell almost imperceptibly with the respiratory act. The epigastrium was also motionless, and none of the accessory muscles of respiration came to the aid of the little sufferer. The only way in which the child could increase his feeble expirations was by pressing with his little fists on the upper part of the abdomen. The treatment consisted in hypodermatic injections of strychnine, and the application of the induced current to the phrenic nerves and the abdominal muscles. After twenty applications of electricity, and the administration of about one-third of a grain of strychnine the patient was cured.—*Wiener Medizinische Wochenschrift*, June 12, 1886.

Immediate Restoration of Parts to the Normal Position after Tenotomy.—The following are the conclusions of a paper read by Dr. Reginald H. Sayre at a meeting of the Orthopædic Section of the Academy of Medicine (*Alabama Medical and Surgical Journal*, July, 1886): 1. After tenotomy the parts should be immediately restored as nearly as possible to the normal position, and there retained during ten days or two weeks, after which time whatever subsequent treatment may be necessary to vitalize paralyzed muscles, or complete the restoration of natural functions, should be carried out as may be necessary. 2. This proceeding is accompanied by the least discomfort to the patient, and annoyance to the surgeon, and with a vast saving of time. 3. There is no more danger of non-union of the ends of the divided tendon in this manner than by other modes of proceeding. 4. There is less apt to be a thin, imperfect bond of union between the ends of the tendon than when the gradual reduction of the deformity is practised. 5. This mode of operation is applicable at the foot, knee, thigh, or neck, where there is no anchylosis to be overcome, but that in cases of long-standing anchylosis at the knee when tenotomy is but preparatory to *brisement forcé*, the latter should be deferred for forty-eight hours, to avoid possible risk from gaping of the external wound due to the

violence of the manipulations. Should the deformity at the knee be due simply to contractured muscles, immediate replacement may be practised here also.

Hyperæmia and Phlegmons of the Vagina.—Dr. Antonio Stravino reports several cases of this condition, occurring in consequence of sexual abuses (*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886). Among the causes he distinguishes the exciting and the predisposing. Of the former he mentions frequent repetition of the sexual act, its performance during menstruation, or too soon after child-birth, masturbation, gonorrhœa, and the use of cold to suppress the menstrual flow, or leucorrhœa. Of the predisposing causes the most potent are the great vascularity of the uterus and its adnexa, the numerous anastomoses, and the serpiginous course of the vessels tending to retard the circulation, the complicated venous circulation, the abundance of lymphatics, and the free communication existing between the subperitoneal and uterine lymphatic ducts. Besides the usual symptoms of vaginal phlegmons, there are acute pains during coitus, a tendency to menorrhagia and metrorrhagia, and to leucorrhœa, sterility from the acidity of the uterine mucus, gastric disturbance, and nervous irritability. In the treatment, Dr. Stravino recommends absolute rest in the supine position with the legs elevated, abstention from the sexual act, the application of cold, local abstraction of blood, and a general tonic regimen.

Excision of the Primary Sore in the Prevention of Syphilis.—Dr. Andronico reports four cases in which he excised the initial lesion of syphilis, with a result of preventing the appearance of secondary symptoms. All the cases were apparently above suspicion, as the author was able to trace the source of infection and to convince himself of the nature of the affection in each instance. He concludes from these cases that: 1. The abortive method is an effectual means of preventing systemic infection, when the primary lesion is situated upon certain parts suitable for operation, such as the labia majora or minora, prepuce, or skin of the penis, etc. 2. The excision must be made within forty-eight hours, or, at most, within three days after the appearance of the chancre. 3. A greater age of the primary sore and the existence of glandular infection are contra-indications to the operation.—*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886.

Nervous Eczema.—Dr. Tommasoli relates the following interesting case. (*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886). The patient was a boy six years of age, who had had for eighteen months symmetrical patches of eczema on the legs, forearms, and ears. Various methods of treatment had brought about some amelioration, but not a cure, which was obtained only by prolonged use of the sodic chloride of gold. The boy was of an irascible disposition, and had intervals of aggravated bad temper which, his mother said, rendered him unbearable to those about him. During these attacks, although every precaution was taken to prevent him scratching himself, there was an increase in the areas of eczema, and the patches, which were usually dry, became moist and covered with crusts, and there was an increase in the number and size of the papules.

Treatment of Ulcers by Carbolic Acid Spray.—M. Gilles de la Tourette reports in the *Revue de Chirurgie* for July, 1886, several cases of indolent varicose ulcers, which had resisted all other ordinary methods of treatment, cured by the use of a spray of carbolic acid. The solution used varied in strength, according to the apparent indolence of the ulcers, from 1 to 50 to 1 to 20, and the ulcer was sprayed continuously for from an hour and a half to two hours every morning and night. In the intervals the surface was covered with borated vaseline of ten-per cent. strength. From the very first days of treatment the pain grew less, and soon disappeared. There were no symptoms, either local or general, of phenic-acid poisoning. Extreme age and debility of the patients offered no contra-indication to the treatment. The author found that the best results were obtained in ulcers with flat edges from which cicatrization could readily proceed, and he was unsuccessful in those cases with hard and elevated edges. After the treatment had been carried out for some time in such cases, the surface of the ulcer would look healthy but the edges still remained indurated. It was proposed to scarify the edges but the patients would not consent.

Anæsthesia by Suggestion.—Dr. Pitres relates in the *Journal de Médicine de Bordeaux*, a case which well illustrates the power of hypnotic suggestion in producing anæsthesia. The patient was an hysterical woman, easily hypnotizable, who was suffering from a very painful phlegmon on the left thigh, following a hypodermic injection. The abscess was the seat of acute shooting pains, and could not be touched without causing the patient to scream. Dr. Pitres proposed to put the woman to sleep by hypnotism, then to order her to allow the abscess to be opened without feeling any pain, either during or after the operation, and finally to wake her up and make the incision. This was done as proposed; a dissection was made down upon the abscess, which was emptied of the pus, cleaned and dressed. During all this time the patient watched the proceedings with a smile, and expressed astonishment that the abscess could be opened without giving her the slightest discomfort.

Treatment of Glaucoma by Cocaine and Esérine.—Dr. H. Armaignac reports in the *Revue Clinique d'Oculistique* for June, 1886, two cases of glaucoma treated by instillations of cocaine and esérine. The former was used in a three-per cent. solution, the latter in a solution of the strength of 1 to 200. A drop of each was placed in the eye at intervals, varying according to the indications, and six minutes were always allowed to elapse after one solution was instilled before the drop of the second solution was put in the eye. Very signal benefit was obtained in each case, and the writer hoped that the success obtained would lead to further trials of this method of treatment.

Cæsarian Section in Country Practice.—Mr. Thompson Forster relates in *The Lancet*, of August 14, 1886, an interesting case of Cæsarian section successfully performed under great difficulties. The case was one of dystocia from contracted pelvis, and the woman had been in labor two days. The head was perforated and every effort made to extract it, but without success. It was then determined to perform the Cæsarian section. The woman was laid across the bed, the nurse took charge of the patient's hands, and an assistant gave the chloroform. A farthing candle was on the bed, another on a chair with a basin of water and some sponges, and one small oil-lamp was on a box with the instruments. No more assistants could be had, as the room was not large enough to accommodate them. The incision was made through the abdominal wall and the uterus, and the child was abstracted. Considerable hemorrhage occurred, but after some difficulty the uterus was made to contract and the bleeding ceased. During the whole of the time the woman was vomiting violently, and the intestines escaped from the wound. These had to be held back with one hand while the sutures were passed through the abdominal wall with the other. Of course, no attempt at antisepsis was made. There was considerable elevation of temperature during the succeeding days, and trouble was experienced from bed-sores, but the woman eventually recovered, and one month after the operation was met by Mr. Forster, walking with her husband.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CALOMEL AS A DIURETIC IN HEART DISEASE.

IN the eager search after, and trial of, new remedies which seem to characterize the modern school of therapeutists, and for the furtherance of which even several medical journals have been specially established, we are in not a little danger of overlooking valuable properties possessed by some of the standard agents of the materia medica. It is seldom that one can open a journal of the present day without seeing a notice of some new hypnotic, antipyretic, cardiac stimulant, or anæsthetic, but the study of the older remedies, the catalogue of whose virtues is by no means complete, is apparently well-nigh abandoned.

Dr. B. Stiller, of Buda-Pest, contributes an article to the *Wiener Medizinische Wochenschrift* of July 10, 1886, upon the curative properties of calomel in cardiac dropsy. While recognizing that digitalis, properly employed, is the best remedy of the kind which we possess, he was yet not blind to the fact that it possesses some disadvantages, and set about to determine what other medicine was the best suited for use in the necessary intervals of the administration of foxglove. Convallaria, maialis, adonis vernalis, and caffein, were each in turn tried, and rejected as unsatisfactory. Finally he saw in the *Orvosi Hetilap* a report by Dr. Jendrassik of a number of cases of cardiac dropsy successfully treated by calomel. The latter had accidentally discovered the diuretic action of calomel while giving it, for another purpose, to a patient with heart disease.

Acting upon the suggestion of the Hungarian journal, Dr. Stiller began experimenting with the mercurial. The results obtained were so prompt and convincing that the writer is led to rank the drug among the most valuable of all cardiac diuretics. In the case of a man, sixty-eight years of age, with ascites and œdema of the lower extremities dependent upon mitral insufficiency, the secretion of urine was increased within a week from thirty to over one hundred ounces a day, and in another week the dropsy had entirely disappeared. No other remedy than calomel was used. In another case of ascites and anasarca, following general dilatation (weakened heart), the quantity of urine was increased in five days from a little over ten ounces to over one hundred. A number of other cases are reported in which equally striking results were obtained.

From a study of all the cases thus treated the author comes to the following conclusions: 1. Calomel is a prompt diuretic and hydragogue in cardiac dropsy, its action in this respect being even more speedy and intense than is that of digitalis. 2. It removes not only œdema of the tissues, but also effusions within the great cavities of the body. 3. Diuresis usually comes on suddenly on the third or fourth day; it is then advisable to discontinue the remedy, and to resume it only in case the urine becomes again markedly reduced in amount. 4. Calomel seems merely to facilitate resorption of the fluid, and not to exert any influence upon the heart or kidneys; yet œdema, consequent upon nephritis or obstruction to the portal system, and inflammatory exudations, do not appear to be influenced favorably by the mercurial, and even in cardiac dropsy, when the urine is very albuminous, the action of the calomel seems to be retarded, no effect being observed in many cases until the fifth or sixth day. 5. Finally, the drug is no substitute for digitalis, since it is not in any sense a cardiac remedy; but it answers an admirable purpose as a complement to the other, and as a special stimulant to resorption in cases of necessity.

The dose employed was usually about three grains three times a day, though sometimes smaller quantities more frequently repeated were found more beneficial. Diarrhœa was a frequent result, and sometimes necessitated the temporary withholding of the remedy; but it could be restrained by opium, which latter, given in combination with the calomel, seemed not to affect its diuretic action. The writer met with but one case of stomatitis, although Jendrassik found it to occur with rather unpleasant frequency.

THE FUNCTION OF THE PROSTATE GLAND.

PHYSIOLOGISTS have for a long time believed that the prostatic secretion served some more important purpose than that merely of a diluent of the spermatic fluid, but they were unable to determine precisely what its other functions might be. As is known, the secretion is a thin milky fluid, of an acid reaction, and containing various salts formed by the union of phosphoric, sulphuric, and hydrochloric acids with potassium, sodium, and calcium. It also contains a peculiar organic base, the phosphate of which, known as Böttscher's spermatic crystals, gives to the seminal fluid its peculiar odor. The milky appearance is due to an emulsion in an albuminous fluid of five drops of lecithin.

That the prostate gland plays an important part in the generative function is shown by the fact that it exists only in the male, and that it remains undeveloped up to the time of puberty. Experiments have shown also that the prostatic secretion is a stimulant to the spermatozoa, and as it is an integral part of the ejaculated seminal fluid, Buxmann believed that its most important function was to preserve the life of the spermatozoa. This theory has recently received confirmation through a case reported by Professor Fürbringer, at a meeting of the Berlin Medical Society (*Berliner Klinische Wochenschrift*, July 19, 1886).

The patient was a young man, thirty years of age, who was sent to the author on account of spermatorrhœa.

He was a moral and intelligent gentleman, of a nervous disposition, and with a neuropathic family history. Examination revealed no organic cause for his trouble, and the diagnosis was made of neurasthenia, with the added symptom of seminal losses during defecation and micturition. Examination of the fluid showed it to be odorless, Böttscher's crystals were absent, and though well-formed spermatozoa were present in great numbers, most of them were motionless, only a few executing sluggish movements for a minute or two. The emission was a simple flow of the unmixed contents of the seminal vesicles, due, without doubt, to a nervous atony of the ejaculatory ducts. The patient was sent for treatment to an institution for nervous diseases, and returned after two months very greatly improved in health, suffering from passive seminal losses only at rare intervals. A second examination of the fluid gave the same results as the previous one. But he shortly afterward had an emission, accompanied by erection, during sleep, and an examination of this matter showed it to be a perfectly normal seminal fluid. Well-formed Böttscher's crystals were present, and the movements of the spermatozoa were visible for over twenty-four hours.

From a study of this case the author concludes, justly as it would seem, that the function of the prostatic secretion is to exert a specific vivifying influence upon the spermatozoa, which while in the seminal ducts and vesicles possess but slight vitality, quickly die when removed from the body unless subjected to the stimulating influence of the prostatic fluid. Thus Buxmann's supposition appears to be confirmed, and a not unimportant advance has been made in the study of the physiology of generation.

THE UTILITY OF OPERATION IN EPITHELIOMA OF THE LIP.

It is commonly supposed that epithelioma of the lip is one of the most curable of all forms of cancer, and that its removal by excision is less frequently followed by a return of the disease than is that of any other variety of malignant growth. Yet writers on this subject are by no means agreed as to the prognosis in such cases, some alleging that an early operation is almost invariably successful, while others, although admitting that a removal of the neoplasm prolongs life, believe that a return occurs in nearly every instance.

We find in the *Centralblatt für Chirurgie* of June 19, 1886, an interesting series of statistics bearing upon this point, collected by Dr. A. Wörner from the records of the clinic at Tübingen and from other sources. The number of Tübingen cases was 305; and of these, 354 operations were performed upon 277 patients. In the greater number the removal was accomplished by a simple V-shaped or semicircular incision, though in a few, owing to the extent of the disease, resection of a portion of the jaw was required. Of the 277 patients operated upon, 142 relapses occurred in 111 individuals, of which 87.3 per cent. occurred within the first year and 12.7 per cent. after the lapse of one or more years. In one instance the disease returned nine years after the operation; the growth was removed a second time, and then the patient passed eleven years without a relapse, and died finally of old age. Of the 277 cases, 89, or 32.13 per cent., were still living, without a return of the disease, at an average period of 5.8 years after excision, and 71, or 25.63 per cent., had died of other affections at an average period of freedom from relapse of 8.4 years after operation. The mortality of the operation itself amounted to 5.77 per cent., the fatal termination in most cases being attributable to hypostatic pneumonia occurring in individuals of advanced age. The greater number of the operations was performed prior to the introduction of the modern antiseptic methods.

Dr. Wörner has also collected another series of cases from the writings of Thiersch, v. Bergmann, Billroth, Winiwarter, Fischer, Kocher, and Partsch. Of the 866 cases in this series, 244, or over 28 per cent., were free from a return of the disease after a period of three years following excision, and of the 622 relapses, 545, or 87.6 per cent., took place within the first year. The mortality following the operation was for the entire series about 7 per cent., varying, in the statistics of the different operators, from 2.81 to 14.9 per cent. The cases all belonged to the pre-antiseptic period.

From these two series of statistics, embracing in all 1,143 cases, we find that a very large proportion of all cases of relapse occur within the first year, while the number of relapses after the third year is so small that patients who have survived this period without a return of the disease may, almost with certainty, be regarded as definitely cured. But, what is of greater importance and more to the point, these figures establish beyond question the value of excision of the growth, and justify the general opinion that operation is beneficial and necessary in epithelioma of the lip. Of the Tübingen cases over 57 per cent. lived for three years or more without a return of the disease, and of the cases reported by other observers 28 per cent. were free from relapse at the expiration of the same period. Thus, roughly speaking, we are justified in hoping that from one-fourth to one-half of our patients will be permanently cured by an operation; and for the others, unless the disease be so far advanced as to be beyond the reach of the knife or the caustic, we may at least expect a prolongation of life and a considerable period of freedom from suffering.

CONDURANGO IN GASTRIC TROUBLES.

After the disappointment of some sanguine therapeutists whose hopes had been raised by reports of the alleged virtues of condurango as a specific for cancer, the drug fell into disuse and almost oblivion. But if the experience of Dr. Wilhelmy, of Berlin, be borne out by others, we may expect to see a rehabilitation of it as a remedy of some value in certain affections, though not in carcinoma.

This author writes in the *Berliner Klinische Wochenschrift* of July 19, 1886, that he has found condurango wine very serviceable in many affections of the stomach. He was led to use it from the fact that Friedreich had claimed to have cured carcinoma of the stomach by condurango; and while believing that there had been an error in diagnosis, he yet thought it likely that the drug would prove to be of value in non-cancerous gastric diseases. He prepared a wine of ten per cent. strength, made from good Madeira, to which was added two per

cent. of citrate of iron, and a bitter to disguise the taste. In cancer of the stomach he found that the wine without iron, given in two tablespoonful doses four times a day, reduced the pains very considerably within two weeks, increased the appetite, and quieted very markedly the distressing vomiting. The cancer was not cured, for the patients died, but their life, while it continued, was made much more endurable. In cases of cancer of the pylorus, he found that a longer continued moistening of the surface of the neoplasm was of service, and to this end advises the exhibition of somewhat larger doses, about three tablespoonfuls.

Much more distinct, and in some cases even brilliant, results were obtained in the treatment of gastric ulcer by condurango wine with iron. The best results were observed in those instances in which chlorosis appeared to be the cause of the ulceration. Only those cases are cited in which vomiting of blood, the passage of blood in the stools, or the presence of a fixed circumscribed painful point over the region of the stomach, rendered the diagnosis certain. The author gave the ferrated wine in tablespoonful doses six times a day, whether hemorrhage were present or not, and had almost always the satisfaction of noting the disappearance of bleeding and of pain within from two to four days. He used morphine and ice only in a few of the worst cases, but of course observed great care in the regulation of the diet. Many of the patients were domestic servants, and they were usually able to return to their duties within eight or ten days, though the use of the wine was continued for two months longer. There were a few relapses, but they were not severe, and were of very short duration. The chlorosis was cured as well as the ulceration. In other chronic affections of the stomach good results were obtained, and Dr. Wilhelmy says that he was especially pleased with the effects in phthisical anorexia. The exhibition of the wine in these cases was quickly followed by a very noticeable and lasting improvement in the appetite and digestion.

CONTRAST BETWEEN AMERICAN AND BRITISH METHODS IN CLAMP OPERATION FOR HÆMORRHOIDS.

ALMOST simultaneously an American writer and a British writer described the methods of removing hæmorrhoids with the clamp and cautery, together with the after-treatment. The contrast to the description of the latter is interesting and instructive.

Dr. Richard Davy, in a clinical lecture on rectal fistula and hæmorrhoids at the Westminster Hospital, says, in closing his account of the operation: "After all the hæmorrhoids have been carefully removed, inject about one ounce of sweet oil into the rectum; and should oozing be free plug the rectum." This he does by the means of a sponge covered with oil-silk introduced with a pair of bone forceps. Then he goes on to say: "The after-treatment consists in good, nutritious, non-stimulating diet, rest in bed, the moderate use of opium, and retention of fæces, so as to avoid the action of that complicated group of muscles necessary for the act. I have often had my patients pass two, or even three, weeks without any action of the bowels; and although to the general patient this confinement seems very dreadful, any evil effect can be readily overcome eventually by a warm soap and water wash. The sponge is usually expelled or withdrawn on the succeeding or second day, and recovery is complete in about one month from the day of the operation."

Dr. C. B. Kelsey says in his paper on "The Treatment of Hæmorrhoids," in a recent number of THE MEDICAL RECORD, that after the clamp operation, "Seldom is it necessary to give any morphine except the suppository placed in the rectum immediately after the operation. . . . Very exceptionally does this method keep the patient confined to his bed and room after the tenth day . . . The bowels should not be confined more than fifty-six hours. If the bowels are confined until the tenth day great pain will be the invariable result of the first motion. The fæces have become hard and voluminous. Great straining and suffering are the necessary consequences. Moreover, nothing is gained. The wounds heal no more quickly for the constipation, if as quickly, and the idea that the passages may in some way cause them harm is not founded on fact.

"By the other plan an easy, natural movement is secured on the third day, which is attended with little or no pain. The rectum is thoroughly cleansed, not only of fæces but of blood and discharges, in the most natural and effectual way; there is less danger of absorption of offensive matter, and the patient, if one of regular habits, feels much better every way. After the first motion a gentle laxative should be given every night, for ten days longer, to secure one easy, natural passage daily.

"After the operation the patient may usually consult his or her own appetite as regards diet. Nothing reasonable need be denied—another point gained by getting the bowels in regular working order."

DISCOVERY OF THE PATHOGENIC ORGANISM OF THE SWINE-PLAGUE.

THE extreme difficulties of reaching certainty in bacteriological researches must be apparent to anyone who has followed the record of its work in the past ten years. An excellent illustration is found in the study which has been made of the virus of hog-cholera (swine-plague, infectious pneumo-enteritis). Dr. D. E. Salmon gives some account of this in a recent issue of *The Sanitarian*. Hog-cholera costs this country some twenty-five millions of dollars yearly, and hence deserves attention from economists as well as men of science. It is an infectious disease spreading epidemically through herds. In 1876 Dr. E. Klein described a micrococcus which he found in the tissues of animals suffering from the disease. In 1878 he found, cultivated, and inoculated a bacillus, and thought it pathogenic. Lately, however, he has attributed the disease to a different bacillus occurring in the form of short rods. In 1880 Dr. Salmon found and cultivated a micrococcus which he believed, until lately, to be the essential virus of swine-plague. In 1883 M. Pasteur announced that the *rouget* of France, believed to be identical with our swine-plague, was caused by a dumb-bell-shaped microbion. This germ, he said, could be attenuated and made to act as a vaccine. We are told, however, by Dr. Salmon, that the vaccine which Pasteur now sells for *rouget* contains a fine bacillus,

which grows in cultures into filaments of considerable length. Inoculations with this vaccine, according to Dr. Salmon, do not cause a disease identical with our swine-plague.

Dr. Salmon states that he has at last found a microbe which seems to be very certainly the cause of swine-plague. The organism is rather a bacterium than bacillus; it is very irritant, and produces all the symptoms and lesions of the disease. It was found in the tissues of hogs in the early stage of the disease, and it is believed that previous errors have been due to the fact that in the late stages various septic and other organisms develop.

DO LOWER ANIMALS HAVE TYPHOID FEVER?

For many years it was contended that the so-called pig-typhoid, or, as it is now known, infectious pneumo-enteritis, was identical with human typhoid. French veterinarians have also claimed that horses suffered from typhoid fever; but the swine-plague has been found to be a distinct disorder, and the question whether the horse can have typhoid is still unsettled.

Recently, however, Dr. J. Bland Sutton (*Journal of Comparative Medicine*) brings forward evidence to show that monkeys, tigers, and beavers may have enteric fever.

In 1839 M. Rayer describes an epidemic of this disease which broke out among the monkeys in the ménagerie of the Muséum d'Histoire Naturelle, Paris. On this occasion, M. Serres, who had previously observed the affection in monkeys, dogs, and cats, and had made careful preparations of the intestinal lesions, was able to make careful observations on the animals during life. The symptoms were very striking, being diarrhœa, increased frequency of pulse, and fever ending almost always in death.

Dr. Bland describes cases of typhoid fever which he observed, in 1882, among the monkeys of the London Zoological Gardens. While making a post-mortem examination on a lemur which had died in the Zoological Gardens, from perforation of the ileum near the cæcum, the Peyer's patches were found to be ulcerated in the same manner, and presented the typical appearance as these structures do under the same condition in man. No other organs presented lesions of note. For some days before death the lemur had suffered from profuse diarrhœa, the keeper experiencing considerable difficulty in keeping the cage clean. Dr. Bland was so positive that the ulcerations were typhoid that the deaths of other monkeys were predicted.

Seven days later another monkey, which had lived in the cage with the first, died with the same symptoms and lesions; later, two other monkeys and a tiger died of the same disease. At the time these cases occurred typhoid fever was raging in the neighboring district.

In 1885 the Zoological Gardens received an instalment of six Canadian beavers. Four of these died with a disease lasting about six weeks, and characterized by disinclination to food and profuse diarrhœa. On post-mortem examination ulcerations of Peyer's patches were discovered.

Dr. W. L. Conklin, Superintendent of Central Park Menagerie, reports a case of apparent typhoid occurring recently in a monkey. The animal had suffered from diarrhœa and hemorrhages from the bowels, and an autopsy showed extensive ulcerations of Peyer's patches. Dr. Bland states that the utmost care was taken to exclude the question of tuberculosis.

Experiments with cultures of the typhoid bacillus have, it is believed, resulted in producing a disease allied to, or identical with, typhoid in the rabbit and guinea-pig, although here experimenters differ.

There is, however, more or less evidence that typhoid fever can affect, not only man, but the quadrumane—the tiger, cat, and dog, the guinea-pig and rabbit, and possibly the horse.

The importance of this fact, if established, is twofold: It makes it possible to study the disease more systematically, and to apply to it experimental methods; again, if our menageries and our stables can breed the typhoid poison, it is a matter of the highest importance that this should be known.

THE MUSCULAR DISEASE.

Under the above title a writer in the *Philadelphia Medical Times* describes the different forms of progressive muscular atrophy which originate and are confined to the muscle itself. The researches of neurologists in late years have clearly established the fact that there are two sharply distinguished forms of progressive muscular atrophy; the one has its seat in the trophic centres of the spinal cord, and it constitutes the ordinary type of progressive muscular atrophy. It is sometimes spoken of as the Duchenne-Aran form of the disease, and it is not infrequently met with by practitioners.

The other types include all the various forms of progressive atrophy in which the disease is seated primarily in the muscle; these are united by the writer under the general title of "the muscular disease." Up to within a recent period, observers had been describing and classifying as distinct disorders many different phases of this affection. For example, the pseudo-hypertrophy of children has been treated of as an independent disease; so also the infantile progressive muscular atrophy described by Duchenne, and the juvenile progressive muscular atrophy of Erb. Other forms were described and distinguished by the parts of the body first attacked, or the age of onset, or the presence or absence of a false or true hypertrophy. It seems quite evident now, however, that these atrophies are all essentially identical. They are family or hereditary diseases; they begin in the muscle, producing a degenerative atrophy of that tissue, with or without a false hypertrophy; their course is very chronic, and often interrupted by long periods of rest; the muscles are attacked one after another in the order of their anatomical relations, and not in groups having the same physiological function, as is the case in the spinal form of the disease. There are no vaso-motor symptoms and no fibrillary twitchings. All these things serve to separate the spinal and myopathic atrophies quite sharply, and also to unite the latter in a common type.

Few cases of the muscular disease have been recognized in this country, and these have generally been cases of pseudo-hypertrophy. It may be that a wider

knowledge of its characteristics will lead to the report of more cases.

The relations of the atrophies are well shown in the following table:

The primary progressive muscular atrophies of spinal origin.	Progressive muscular atrophy (Duchenne-Aran). Bulbar paralysis. Ophthalmoplegia externa. Irregular types—*e.g.*, scapulo-humeral form of Vulpian.
The primary progressive atrophies of muscular origin (the Muscular Disease).	1. Pseudo-hypertrophic paralysis. 2. The family atrophies: (*a*) Juvenile atrophy of Erb. (*b*) Infantile progressive muscular atrophy of Duchenne. (*c*) The non-atrophic form of Charcot. (*d*) Other types, classified (by Eichorst, Zimmerlin, etc.) according to the muscular groups first or most attacked.

News of the Week.

THE CASE OF COUNTER-PRESCRIBING AND THE VERDICT.—Mr. W. A. Purrington, counsel for the Medical Society of the County of New York, sends us the following: "Sir: My attention has been called to an editorial in THE MEDICAL RECORD upon counter-prescribing, in which reference was made to a brief of mine in a recent case affecting apothecaries. I do not think that the discharge of the defendants in that case is attributable to any defect in the law—defective as our present law is. The question was one of veracity, and the committing magistrate believed the testimony, it would seem, of the defendants. Believing their testimony, he did right in discharging them; if he had believed the patient's story he should have held them. No reason was assigned for his decision; but I do not think there is any doubt but what, if anyone should do as the complainant testified the defendants did, a clear case of practice of surgery would be made out. They, however, flatly contradicted the patient, and the magistrate necessarily had to believe one side or the other; and I am perfectly satisfied with his decision."

A FELLOWSHIP IN PATHOLOGY at the Johns Hopkins University, yielding five hundred dollars in addition to free tuition, will be granted in October, 1886, if a suitable candidate applies. The application must be made prior to October 1st. The candidate must give evidence of a liberal education (including especially physics, chemistry, biology, and modern languages), and of special aptitude for pathological study, such as that afforded by some previous scientific work. The holder of the fellowship will be expected to devote his time to some special line of investigation (not strictly professional) under the direction of the Professor of Pathology. Further information concerning the purposes and the regulations of University fellowships is contained in the "Annual Register."

THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA IN RUINS.—The following letter to Dr. L. A. Sayre, of this city, will explain itself: "Charleston, S. C., September 11, 1886. Dear Doctor: In the great calamity which has befallen the people of this city, the Medical College of the State of South Carolina has been seriously injured—to such an extent that the Faculty have felt constrained to appeal to members of the profession to aid them in repairing the damages. I have been requested by the Faculty to write to you, asking that you will use your influence among friends to obtain any assistance in their power. We hope to begin lectures on October 15th, perhaps in a temporary building. The entire roof of the college will have to be reconstructed; the walls also parted. The contributions to the people here have been very generous, but medical institutions and physicians derive no benefit from such. You know what peculiar position in a community we occupy: every service expected of us, and the most unselfish devotion to relieving others; while we are supposed to be endowed with the faculty of living on air. I need not give you any description of the scenes through which we have passed—the character of which has not been exaggerated in the papers—as these last have furnished the entire country with full particulars. We are still sleeping in a tent in a garden, as women and children complicate the difficulty, and are not readily moved out of the house in case of a shock. These have greatly subsided in force and frequency, and confidence is being fast restored. My house, being of brick, is seriously injured, but habitable. I remain, dear doctor, with best wishes for your health, sincerely yours. F. PEYRE PORCHER, M.D., Professor in Medical College of the State of South Carolina."

CASES OF GLANDERS AND FARCY have of late been quite numerous in this city, and the Board of Health has undertaken to enforce vigorously the articles of the Sanitary Code, compelling a prompt notification of the presence of this malignant and dangerous disorder.

ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS.—The fifty-ninth annual meeting of this association will be held in Berlin, from the 18th to the 24th of September. There are to be thirty sections. The official programme has been issued, and contains a long list of titles of papers on various subjects, medical and scientific, which are to be presented.

NEW SWEDISH UNIVERSITIES.—The establishment of two new universities in Sweden is contemplated. They are to be located at Stockholm and Gothenburg. The two now in existence are in Upsala and Lund.

SOCIETY OF RUSSIAN ALIENISTS.—The first congress of Russian alienists is to be held in Moscow, in December, on the occasion of the second congress of Russian physicians.

FEMALE MEDICAL STUDENTS IN INDIA.—There are at present fourteen female students in the Madras Medical College, four of whom are natives of India. Lady Dufferin has done much to promote the medical education of women in that country, and has secured good appointments for a number of female physicians in Calcutta and elsewhere.

THE FIFTH ANNUAL MEETING OF THE SOCIETY OF ITALIAN ALIENISTS will be held in Sienna, from September 19th to the 25th.

A CONGRESS OF CREMATIONISTS.—The German and Austrian Cremation Association will hold a congress at Gotha about the middle of September. A matter which will be specially considered is, how to overcome the opposition of the various governments who have hitherto declined to permit cremation.

THE CHLORODYNE HABIT.—The number of forms of dissipation is something almost incalculable. We constantly meet with reports of the arsenic habit, the chloral habit, the ether habit, and many others, and the *British Medical Journal* notes three cases of the chlorodyne habit. At the inquest on the body of a lady, aged sixty-two, of independent means, residing with two other maiden sisters, it was stated in the course of the medical evidence, that all three of the sisters had been in the habit, for two or three years, of taking chlorodyne in large quantities, so much so, that their bodies had become emaciated, their mental condition affected, and the use of their limbs had become impaired. The body of the deceased did not weigh more than fifty pounds, and death was due to continued overdosing of chlorodyne. The jury returned a verdict of death from continued overdoses of chlorodyne.

A DISCUSSION ON VACCINATION.—The British Medical Association has been invited, through the public press, by an anti-vaccinationist, to select a "champion" to discuss in public debate with another champion, appointed by the anti-vaccination societies of England, the merits of vaccination.

FASTING IN RUSSIA.—It is stated in *The Sanitary World* that the Holy Synod, in St. Petersburg, has decided that Russian soldiers in future must observe Lent in the most rigorous way. They will have to fast not only during the four "Great Lents" yearly, but also every Wednesday and Friday, and the six great days of prayer and repentance. This is the calculation: The Great Lent (of Easter), 79 days; Petroffki Lent, 20 to 50; Usspenski Lent, 17; Filippoffski Lent, 39; six days of prayer and repentance, 6; 31 Wednesdays and 31 Fridays, 62; total, 170 to 200 days, on which dates neither meat nor fish (during the Easter Lent), nor eggs, nor milk, nor even sugar, is allowed. The officers assert that the physical strength of the soldiers must inevitably suffer from the new regimen.

A NEW DANGER IN OVARIOTOMY.—The dangers of spaying have hitherto been confined to the woman operated upon, and, owing to the greater skill which has come from the rapidly increasing experience of many operators, these have been growing less and less. But now it is the operator who is incurring the greater risk. Two surgeons in Liverpool have recently exposed themselves to the vengeance of the irate husbands of their patients. One of these aggrieved individuals has sued a surgeon for damages for unsexing his wife, and the other has sent the author of his woes a challenge to fight a duel.

ANOTHER PROTEST AGAINST INDISCRIMINATE OVARIOTOMY.—It is evident that the medical conscience is beginning to be awakened to the fact that the operation of spaying is often performed without sufficient justification. In a recent article on "The So-called Laparotomy Epidemic" in the *Dublin Journal of Medical Science*, Dr. T. More Madden expresses himself in the following terms: "The facts cannot be eliminated from consideration in this discussion that the ovaries are to women what the testes are to men, and that by their complete removal in either case the mutilated individual is thereby unsexed. New words will not alter old facts. And hence the more euphonious phrases by which the removal of the uterine appendages are now referred to, or the more scientific and successful method in which this is accomplished, do not render the ultimate consequences of operations for spaying, or castration of women, now less important than when such operations were more rudely performed and more tersely, if less scientifically, described. These secondary consequences are, *inter alia*, to render those on whom such procedures have been completely carried out, by the removal of both ovaries or Fallopian tubes, incapable of fulfilling what in every Christian community has been generally recognized as one of the chief functions and primary objects of woman's married life, namely, that of childbearing. I have already expressed my belief in the occasional necessity of such operations as the only available means of saving life in certain exceptionally urgent cases. But I need hardly add that, in my opinion, even in these they should not be resorted to without absolute and well-proven necessity, or without the patient's concurrence and full knowledge of all their consequences. Moreover, in obtaining such consent, it should be borne in view, as Dr. Wiglesworth has observed, that there are 'two ways of putting the nature of an operation before patients. If women were only told that by removing their ovaries they became sterile, few in these days would object; but if they were told in addition that by this operation they were completely unsexed, that sexual desire became feebler, that in a few years their voices would change and become somewhat masculine, and that in time the face would become "hairy" like a man—in fact, that a change would ensue somewhat similar to that which takes place in the larger animals after spaying, not one woman in fifty would consent to the operation, except it became a matter of life or death.'"

LIGATURE OF THE VERTEBRAL ARTERIES.—Dr. A. C. Bernays writes: "In your report of my case of 'Ligature of the Vertebral Arteries,' on page 221, August 21, 1886, an error has crept in which I desire to have corrected. In speaking of the high pulse-rate after the ligature, it is given as 180 per minute. This is an error; its greatest height was 160, and this lasted only a short time. The pulse gradually returned to the normal condition as the collateral circulation was more perfectly established."

COMPULSORY REPORTS OF PUERPERAL FEVER.—The police authorities of Berlin have ordered that every physician who is called to attend a case of puerperal fever shall report the same, within twenty-four hours, to the sanitary commission, giving also the name of the midwife who had charge of the case.

A SERIOUS OUTBREAK OF DIPHTHERIA is reported from West Cowes, in the Isle of Wight. It is stated that the sanitary condition of the town is about as bad as possible.

A NEW RUSSIAN JOURNAL.—It is announced in *Vratch* that a new Russian periodical, the *Journal of Obstetrics and Diseases of Women*, is to appear in January next. It is to be the organ of the recently formed Obstetrical and Gynecological Society of St. Petersburg, and the editors are to be Drs. Krassovski, Slavjanski, and Smolski.

A CURIOUS ATTEMPT AT DECEPTION.—A Russian peasant woman, who desired to pass off an infant as her own, in order to make it appear that she had just been delivered, procured the lung of a sheep to answer as a placenta and the seminal duct of a he-goat to represent the umbilical cord. The deception was discovered by Dr. Solovjeff, who relates the case in the *Volkhski Vestnik*.

PROFESSOR VON ARLT, the well-known ophthalmologist, of Vienna, is reported to be suffering from gangrene of the foot following phlebitis and thrombosis of the leg. It was proposed to amputate the leg, but the patient's general condition is so bad that it is feared the operation may prove fatal.

A SHORT METHOD OF CURE FOR ALL DISEASES.—The latest religious sect in Russia has been founded on the dogma that it is a sin to let a fellow-member suffer the martyrdom of disease. Accordingly, when anybody falls sick, one of the believers goes to him and chokes him to death. The person commissioned for the deed is clad in red clothes and is known as "the red death." Unfortunately they do not confine their delicate attentions to the members of the sect alone, but, impelled by a broad charity, seek to cure in their peculiar way everyone, whoever he may be, who has the misfortune to become ill.

BACTERIOTHERAPY.—Drs. Testi and Marzi report in the *Gazzetta degli Ospitali*, three cases of tuberculosis treated by inhalations of bacterium termo. In each case there was a marked diminution in the number of tubercle-bacilli found in the sputa, but in other respects there was no improvement, and the disease progressed steadily just as if untreated. The results of the experiments thus far made in this direction are not encouraging. They appear to show that there is an antagonism between the bacterium termo and the bacillus tuberculosis, but they also show that the disappearance of Koch's bacilli from the sputa is of no special moment. They merely furnish an argument for those who deny that any causal relationship exists between the bacilli and the tubercular process.

THE CHARLESTON MEDICAL RELIEF FUND.

WE take great pleasure in announcing the following subscriptions, in answer to the appeal of THE MEDICAL RECORD for the relief of the suffering physicians of Charleston. The families of many of the physicians are still without sufficient shelter, and more funds are urgently needed. They will be sent without delay to responsible parties, who will take special pains to distribute them in a way to do the most good.

William Wood & Co., New York	$50 00
A. H. Buck, M.D., New York	10 00
Conrad Meinges, M.D., Jersey City, N. J.	10 00
M. G. Dadirrian, M.D., New York	1 00
S. Baruch, M.D., New York	25 00
F. S. Grant, M.D., New York	5 00
Chas. Schram, M.D., New York	5 00
H. P. Chace, M.D., Highland Falls, N. Y.	5 00
Geo. W. Gay, M.D., Boston, Mass.	10 00
J. R. Shellenberger, M.D., Philadelphia, Pa.	5 00
J. H. Bogart, M.D., Roslyn, N. Y.	10 00
J. I. Roe, M.D., Vienna, N. J.	5 00
Richard S. Seaman, M.D., Glen Cove, L. I.	10 00
E. M. Stelle, M.D., Bernardville, N. J.	2 00
M. A. C. and U. W. C., New York	2 00
Daniel A. Currie, M.D., Englewood, N. J.	$10 00
G. W. Talson, M.D., New York	5 00
C. C. Wyckoff, M.D., Buffalo, N. Y.	10 00
A. Huntington, M.D., New York	10 00
"H.," Grand Rapids, Mich.	5 00
F. N. Bruman, M.D., New London, Conn.	5 00
W. J. Scott, M.D., Cleveland, O.	5 00
J. N. Dixon, M.D., Springfield, Ill.	5 00
B. M. Griffith, M.D., Springfield, Ill.	5 00
Thos. W. Dresser, M.D., Springfield, Ill.	5 00
Drs. Buck and Matthews, Springfield, Ill	5 00
H. C. Gill, Springdale, Ia.	1 00
Milo Avery, Springdale, Ia.	1 00
W. H. Draper, M.D., New York	25 00
Mr. William R. Warner (W. R. Warner & Co.), Philadelphia	25 00
W. A. Reed, Philadelphia, Pa.	50 00
F. H. Gerrish, M.D., Portland, Me.	5 00
W. H. Buttolph, M.D., Short Hills, N. J.	10 00

Obituary.

JAMES G. WAKLEY, M.D.,

LONDON, ENGLAND.

DR. JAMES G. WAKLEY, editor of *The Lancet*, died August 30th, of cancer of the tongue and fauces, at Heathlands Park, near Chertsey, England. He was the youngest son of the late Thomas Wakley, founder of *The Lancet*, Member of Parliament for Finsbury, and Coroner for Middlesex, and is survived by his brothers, Thomas H. and H. Membury Wakley, having been associated with the former as half proprietor of *The Lancet*. He became a member of the Royal College of Surgeons of England in 1849, and was graduated Doctor of Medicine at King's College, Aberdeen, in 1852. At his father's death, in 1862, he became editor of *The Lancet*, the duties of which position he discharged for nearly twenty-five years, continuing, in spite of much recent suffering, active in his work up to last Easter. Dr. Wakley proved himself a worthy successor in every way to his distinguished father. Through his painstaking labor, his journalistic skill, and his conscientious devotion to the best ideals in medical journalism, he has kept *The Lancet* against all rivals in the high position won for it by its founder.

JOHN BURKE, M.D.,

NEW YORK.

DR. JOHN BURKE died of pneumonia at his home in this city, on September 8th, at the age of fifty-nine years. He came from his native town, St. John, N. B., early in life to study medicine in this city. He was graduated from the University Medical College in 1849. After graduation he began the practice of medicine in the lower part of the city. His practice was a very large one. He was a member of several local medical societies.

POSTERIOR LUXATION OF THE UPPER EYELID.—Dr. Dépoutout reports, in the *Journal de Médecine et de Chirurgie Pratiques*, a case of luxation of the upper eyelid behind the globe of the eye. A young girl, whose crooked nose and prominent eyes had earned for her among her playmates the nickname of "The Owl," was eating one day, when she suddenly experienced a peculiar sensation in the orbit, and putting her hand to her eye was horrified to find that the globe was almost entirely uncovered. Examination showed that the eye was in its natural rather prominent position, but the upper lid had slipped over it, and was concealed behind it in the cavity of the orbit. The reduction of the dislocation was easily performed, and no evil results, as regarded the vision of the eye, followed the accident.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

MEETINGS OF SECTIONS.

(Continued from page 302.)

SECTION IN OBSTETRICS AND GYNECOLOGY.

THURSDAY, AUGUST 12TH—THIRD DAY.

DR. LUSK read a paper on

THE PROPER MOMENT FOR THE PERFORMANCE OF GASTROTOMY IN ABDOMINAL PREGNANCY.

In order to illustrate the point in question Dr. Lusk recorded the particulars of a case which had lately occurred in his own practice. Mrs. B——, after several attacks of peritonitis, was found to be suffering from an extra-uterine abdominal pregnancy. Having remained for some time under medical supervision, and the fact of the death of the child being fully established, it was suggested to her that she should undergo the operation of laparotomy, with a view to the removal of the fœtus. This, however, she declined. Some months later the general health was found to be rapidly failing, and signs of septic poisoning had fully established themselves. Under these circumstances she had almost determined to avail herself of the chance of relief offered by operation, but before doing so sought the advice of a medical friend, who advised her to go to the seaside and try first what change and climate would do. Very shortly, however, after reaching her destination health failed so rapidly, and signs of hectic became so marked, that she determined to return at once to New York and seek the help of Dr. Lusk. By this time the patient's strength was so exhausted that all hope of benefit from the operation seemed impossible. At the pressing request, however, of her friends it was decided that the abdomen should be opened. At the operation the sac of an abdominal pregnancy was found closely matted to surrounding parts; on opening the sac a fœtus was found in an advanced state of decomposition. The patient rallied from the operation, and for a time hopes were entertained of her recovery; but her strength had become so reduced that she failed to weather the period of recovery and gradually sank. It was clear that the time lost in temporizing and trying the effect of climatic changes allowed her to become so reduced that the chance of relief by the operation was lost.

The moral of such a case as the one just recorded is clearly this: "Is it not a mistake to wait long after the death of the fœtus before performing laparotomy?"

In studying the question the author intended to leave out the treatment of tubal gestation in the early months. The presence of a lithopædion is so rare, and so few cases are known, that they are no help in calculating the result of abdominal ectopic gestation. The question of waiting seems hardly to have been fully discussed, or its risks duly appreciated; cases are numerous where patients have sunk and died while waiting for the formation of these fistulæ; in other cases the process of elimination has extended over years, and even then complete recovery has not been perfectly obtained; in other cases operation has, after all, had to be resorted to, or the patients have been left to linger on in disgusting condition.

Dr. Lusk pointed out that the fatal cases after laparotomy had not been as carefully tabulated as was necessary, if the full value of the operation was to be impartially weighed.

In the fatal list might be found cases which had been left, and only sent for operation when the condition was past recovery; at other times operative measures had been undertaken on the dying—indeed, one might also have said, on the dead. Clearly, the lesson so far brought forward is, that with the first sign of failing health laparotomy ought to be done. Waiting was supposed to make the occurrence of hemorrhage during the operation less likely, and, again, to give time for the more perfect shutting off of the sac from the peritoneal cavity. The great risk of waiting was the insidious way in which septic trouble was apt to supervene; in America, certainly, the mistake had been made more than once of supposing the early septic appearances to be those of malarial poisoning.

The teaching, then, of all past experience is to warn us against waiting till the signs of septic poisoning may have manifested themselves, and rather to resort to operation while the patient's health is good and strength unimpaired. The question of operation during the life of the fœtus, and so endeavoring to save both mother and child, would naturally present itself in discussion; the possibility of this proceeding had been fully established by the now famous case of Dr. Jessop, but, as a rule, the question would always be a hard one to decide. In all cases, if possible, operative procedures should only be undertaken by those who had had considerable experience in abdominal surgery. One point in favor of early operation ought not to be overlooked, viz., that by opening the abdomen at an early period, before the cyst-wall had become matted to surrounding structures, there would be a better prospect of removing the whole sac.

MR. LAWSON TAIT considered that the moral of the paper was, delays are always dangerous, and early interference wise.

DR. MEADOWS recorded a case of abdominal extra-uterine fœtation operated on by himself successfully. The patient had come under his care two years after the termination of the full time of gestation. The abdomen was considerably enlarged and presented all the characters of an ovarian cystoma containing much solid material. After incising the abdominal wall the much-thickened sac was opened, and a macerated, but not decomposed, fœtus was removed. The cyst was stitched to the edges of the abdominal incision, and the patient made a perfect recovery. In this case there had been no signs of septic poisoning and the patient's health had continued good; delay had apparently acted beneficially by causing thickening of the cyst-wall, and so lessening the chances of septic absorption.

DR. WILSON, of Baltimore, advocated the performance of laparotomy, as soon as the diagnosis of extra-uterine fœtation had been made, in all cases in which the application of electricity, the injection of morphia into the cyst, and such like expedients had failed. He recorded particulars of a case which had occurred in his practice, in which twins had existed, one of whom was born *per vias naturales*, and the other by abdominal incision from an extra-uterine cyst. The mother died in thirty-six hours from septicæmia.

MR. JESSOP, of Leeds, wished to know why, as in his own well-known case, an operation should not be undertaken early, with the view of saving both mother and child. Was not the time while the child was still living the right one for operation, and what were the dangers of interfering then? In his own opinion, the best time to operate was the earliest time at which you met with the case; such had been his feeling when he undertook the case he had referred to, and the success gained might be a guide for others.

MR. ALBAN DORAN was of the opinion that the longer the delay the greater would be the thickening of the cyst-

wall. He recorded a case of extra-uterine pregnancy occurring in his own practice, in which the cyst-wall was found greatly hypertrophied and very intimately adherent to the surrounding tissues. The result proved fatal to the mother. In this case, had the operation been done earlier, the cyst and neighboring viscera would have been less matted together, there would have been a fair chance of removing the cyst-wall entire, and the mother's life would have been saved.

DR. EDIS thought that with our present knowledge we must treat each case on its own merits; different cases taught different lessons, and no one was quite a guide for another. The question of operating during the life of the fœtus was a difficult one to decide; there was little doubt it increased the risk to the mother. In his opinion the matter must be left at present *in statu quo*.

DR. BERRY HART presented a report of

A SUCCESSFUL CASE OF ABDOMINAL SECTION FOR RUPTURED FALLOPIAN-TUBE FŒTATION, WITH MICROSCOPIC EXAMINATION OF THE PART OF THE TUBE REMOVED.

In the case recorded, the diagnosis of extra-uterine pregnancy advanced to the third or fourth month had been made, and abdominal section, with a view to its removal, had been advised; the patient, however, though warned of the risks she ran, refused to consent to the operation. Within a short time, however, symptoms of rupture of the sac supervened, and the patient, now alarmed at the possibility of fatal termination, consented to the operation. When the abdomen was opened the cyst was found ruptured and empty, and the fœtus lying loose among the coils of the small intestine. There was no difficulty experienced in the removal of the sac, and hemorrhage was easily stopped by pouring in water heated to 120° F.; the advantage of hot water as a controller of hemorrhage was so admirably illustrated in this operation that Dr. Berry Hart forcibly urged its employment in all similar cases. Discussing the advisability of abdominal section in all cases of ruptured extra-uterine pregnancies, the author quite admitted that cases of rupture do recover, but thought that, on the other hand, it was necessary to consider that a large number of these cases were ultimately seen on the post-mortem table. There was no difficulty in making the diagnosis when rupture had occurred, and the presence of intense anæmia would always serve to differentiate these cases from those in which the occurrence of somewhat similar symptoms was due to the swallowing of irritant poisons. The success obtained by Lawson Tait and other operators in similar cases was strongly in support of the opinions he had advanced, and would serve as an encouragement to others who were resolved to treat these cases on what was clearly the only rational plan. The author considered there was very little risk in operative treatment.

DR. F. H. AVELING gave an account of

A CASE OF EXTRA-UTERINE GESTATION ARRESTED BY ELECTRICITY.

The history of the case was as follows: The patient, while living in the country, was attended by her doctor for repeated attacks of colicky abdominal pain, which was, however, relieved by hot fomentations and opium. After one of these attacks the symptoms of syncope and collapse were so marked that a consultation was deemed advisable. Vaginal examination having shown the presence of a tumor in Douglas' pouch, and the mammary and other signs of pregnancy having been found to be present, the diagnosis of extra-uterine pregnancy was now made. The patient having been removed to London, another consultation was held, and the presence of extra-uterine gestation being established beyond doubt, it was resolved to make an endeavor to check the further development of the cyst by the use of electricity. In carrying out this treatment a faradic battery was used; one pole was introduced into the vagina and pressed against the tumor, while the positive pole was placed on the abdomen over the site of the growth. After the fourth application it was noticed that the tumor had decidedly shrunk in size, and from this time all symptoms of pregnancy gradually disappeared, the catamenia was re-established, and the uterus underwent involution. When last examined the growth had so far shrunk as only to be represented by a small thickening in Douglas' pouch. In studying the history of this method of treatment, we find that it was first employed in France, but soon afterward followed out in England by Dr. Braxton Hicks, who seems to have been the first to have used the current without inserting the electrodes within the sac. In the case now under consideration retroversion of the uterus was probably the cause of the abnormal gestation, and similar cases are recorded by Dr. Meadows and others.

DR. R. PETCH read a paper on

EXTRA-UTERINE GESTATION TREATED BY GALVANO-PUNCTURE.

A case of well-marked extra-uterine gestation came some time ago under the care of the author.

The diagnosis was established beyond all doubt, the uterine bruit could be heard over a considerable area, the fœtal heart-sounds were audible, and pregnancy had probably advanced to the end of the fifth or beginning of sixth month. Desirous to try the effects of galvanism, Dr. Petch passed two needles connected with the battery into the sac *per vaginam*, and closely watched the result. After several applications of the battery the tumor began to shrink, the fœtal heart-sounds were lost, and the uterine bruit gradually ceased. Month by month the tumor grew gradually less, and the parts at the same time resumed their normal state; by the end of six months nothing could be felt of the growth but a small, hard mass, about the size of a chestnut, which lay behind and to the side of the uterus. It was noticeable that, though the fœtal heart-sounds ceased soon after the first application of the current, yet the uterine bruit was audible for some weeks later, or, in other words, the utero-placental circulation persisted long after the death of the fœtus. This last observation seems to teach us how important it is to wait some considerable time after the death of the child before operating, if we would avoid the risks of hemorrhage from detachment of the placenta. If gestation has in any case advanced over seven months, abdominal section ought to be performed for the sake of the child; but if the patient comes under our notice before the seventh month, there is no reason for considering the life of the child, and measures such as galvanism are clearly indicated. There is one point to be considered in connection with the use of electricity before the seventh month, and it is this—even if electricity fails, it in no way interferes with the performance of laparotomy at a later period. The only objection to electricity, which the author could think of, was that it might leave behind a shrunken mass, the presence of which might prove a complication in a later pregnancy. In his own case the patient had gone through a normal pregnancy recently, so this fear had not been realized.

DR. WRIGHT commented on the remarkable way in which the placenta is absorbed in cases of extra-uterine pregnancy and thought it bore on the way in which shrinking took place after the death of the fœtus.

DR. WYLIE drew attention to the difficulties of early and accurate diagnosis in extra-uterine pregnancy. He narrated two cases which had occurred in his own experience by way of illustration, and mentioned that in one of these the supposed pregnancy was found on removal to be an ovarian cystoma. In his opinion many cases were overlooked, owing to the difficulties of diagnosis.

DR. GARDINER, of Montreal, thought that the occur-

rence of pregnancy under unusual circumstances, as for example after a long period of sterility, after an attack of pelvic inflammation, after operation, etc., was a guide to diagnosis. He gave particulars of a case observed by himself, and stated that he considered it unnecessary to pass the electrodes within the sac; it was quite sufficient to apply one pole in the rectum against the growth, while the other was pressed on the abdomen over the position of the cyst. In his own case, which was four months gone, one or two applications of electricity had been enough to arrest further development. Cessation of fœtal life was not enough of itself to remove all danger; his own patient, thinking herself cured, had insisted on leaving bed and getting about prematurely, with the result of bringing on pain, fever, and alarming symptoms for a time.

Dr. Edis condemned in the strongest terms those who looked on at a woman with a ruptured extra-uterine cyst and took no steps to open the abdomen; such conduct was little else than criminal. He thought that many of the cases of so-called arrest of extra-uterine gestation were cases of mistaken diagnosis; pyo-salpinx, ovarian tumor, etc., were liable to be confounded with ectopic pregnancy. Galvanism should be used up to the end of the third month; at the sixth month the employment of galvanism was a mistake, and laparotomy was the operation indicated. In his opinion Dr. Retch had erred greatly in not allowing his patient to go on to the seventh month, and then undergo abdominal section. He narrated a case in which he removed a fœtus per vaginam by cutting with Praguelin's cautery into the sac. Once a sac had been tapped, further steps should be taken with a view to the removal of the tumor.

Dr. Routh thought these cases of ectopic gestation fell naturally into three groups. 1. Cases seen in the early months: here the placental souffle could be heard with the vaginal stethoscope at the sixth week, and diagnosis was easy. 2. Cases at mid-term: here, if rupture occurs, death is almost certain, therefore operation should always be undertaken. 3. Cases after the seventh month where the child is living: in these cases Cæsarean section is indicated and operation is a duty.

Mr. Lawson Tait pointed out that cases of extra-uterine pregnancy always arise owing to the absence of the epithelium and cilia of the Fallopian tubes; if the latter are present impregnation never occurs in the tube, and ectopic gestation is impossible. Rupture always occurs at the site of the placenta; when the latter was placed at the upper part of the tube, a fatal result was the rule; when at the lower, hemorrhage occurred between the layers of the broad ligament, and a favorable issue was often obtained. He protested against children in favorable cases being killed by galvanism or any such nonsense. In his opinion cases were never diagnosed until rupture had taken place.

Dr. Hanks narrated a case of extra-uterine pregnancy, and stated his belief that it was possible to diagnose cases before rupture had taken place.

Dr. Steavenson dwelt on the various forms of electricity used, and considered that men ought to know which was the best form to employ.

It had been supposed that the death of the fœtus was due to shock, but if the nervous supply of the fœtal heart is studied it will be seen how improbable such an explanation is. A shock sufficiently strong to kill the fœtus would be almost certain to cause the death of the mother.

Dr. Lusk thought that it was a matter of indifference whether galvanism or faradism was used, but had found by experience that the galvanic current had to be used in a much stronger degree than the faradic. Faradism could be used with much less discomfort to the mother.

In the early months electricity ought always to be tried, though it was not always successful; in one case he remembered the fœtus was supposed to have been killed, yet the tumor continued to increase and the child reached full term.

Dr. G. Ranney, of Michigan, read a paper on the

Treatment of Mastitis.

The author advocated in all cases treatment by compression with a many-tailed bandage. The latter was of service whenever for any reason it was necessary to check the secretion of the milk.

Illustrative cases were read showing how useful the method was in cases where the child was still-born, in incipient inflammation of the breast, or even in an advanced stage of inflammation. Rubber cloth with adhesive straps might be substituted for the many-tailed bandage. After the breasts had been brought toward the middle line, with a napkin between them (if necessary) to secure even pressure, the bandage should be tightened from above downward; by the time the lower part was finished the upper part would be ready for retightening; this process could be advantageously repeated two or three times. Mere continued pressure with the hand on the breast was sufficient to empty the distended mamma and give relief.

Dr. Edis confirmed this method of treatment.

Dr. Bantock used the method even when abscess had formed. He preferred strips of plaster to the many-tailed bandage.

Dr. Swayne was in the habit of opening abscesses and then using compression by means of strips of plaster.

Dr. Ranney in reply stated that he preferred the bandage to plaster, and that he never allowed abscesses to form.

Dr. M. Beverley read a paper in which he presented

A Record of Twenty Cases of Emmet's Operation for Laceration of the Cervix Uteri and of Three for Procidentia Uteri.

In the author's opinion labor was always the cause for this operation. Usually there was a history of either rapid or instrumental delivery; the history of uterine phlebitis or cellulitis secondary to labor was common. Among the prominent symptoms of ruptured cervix might be mentioned backache, anæmia, sleeplessness, mental irritability, faceache, and leucorrhœa. Vaginal examination generally showed the existence of ectropion of the cervix, granular erosion, hardness of tissue, and a bulky uterus; much new tissue was always present. Dr. Beverley considered that much harm was done in treatment by the use of irritants, the cautery, etc. He had never found any difficulty in the performance of the operation. Out of the twenty cases recorded eighteen had healed by the first intention. Complete rest and hot-water injections were always used for ten days before operating, so as to ward off the possible occurrence of cellulitis. All the author's success had been gained in cases in which ordinary methods of treatment had been exhausted and failed. Reference was made to the use of the operation in staving off the onset of epithelioma.

In the second part of his paper Dr. Beverley commenced by describing the operation as laid down by Dr. Emmet. The great superiority of this procedure over Alexander's operation of shortening the round ligaments was dwelt upon. In the author's first case there was complete procidentia of twenty years' standing, and all forms of pessary had failed to give relief.

Dr. Gordon thought the operation for lacerated cervix, as done in England, was seldom carried out as Dr. Emmet advised. When carried out in the manner recommended by the latter the operation did much good, but badly executed it caused more harm than good.

Dr. Kelly approved of the operation for procidentia uteri, and described it with the help of diagrams.

Dr. Wylie thought that cases of fissure, with sub-involution and evasion, would be operated on much sooner in America; here they were treated unduly long by caustics and irritants.

Dr. Beverley briefly replied.

FRIDAY, AUGUST 13TH—FOURTH DAY.

DR. SAVAGE, of Birmingham, read a paper on

THE REMOVAL OF THE UTERINE APPENDAGES.

Though a great deal had been written and spoken about the removal of *normal* ovaries, yet it was very rarely that healthy glands were extirpated; in most cases the ovaries when removed had been found to be useless for their child-begetting function. There were cases in which the removal of perfectly healthy ovaries was justifiable, as when a pelvis was so contracted that the birth of a child *per vias naturales* was an impossibility, and again in some cases of myo-fibromata of the uterus, though in these latter cases the ovaries were generally found to have become diseased. The most common causes which led to symptoms indicating the need of operation were peritonitis—either ovarian or pelvic—or diseases of the tubes, such as arise from the spread of the gonorrhœal inflammation upward from the vagina. The first class of cases (ovarian peritonitis) often follows a miscarriage or confinement, and is septic in nature. A typical case of this latter class often presents the following history: There has been a confinement, followed by puerperal inflammation; then comes a long period of sterility; later, much pelvic pain is complained of; vaginal examination shows the ovaries to be enlarged and tender, while the general health is more or less wrecked. In former times the occurrence of gonorrhœa in the female was considered a very trifling accident, but with our present knowledge we are bound to look on every such patient as exposed to the risks of pyo-salpinx. We really want to know the pathological importance of (1) atrophied ovaries, and (2) enlarged ovaries. It is still a question where the line is to be drawn between enlarged hypertrophied ovaries and ovarian cystoma, nor is the connection between adherent appendages and cystoma fully established beyond all possibility of discussion. To the inexperienced, difficulties in diagnosis must be common, but in many cases enlarged tubes can be easily mapped out; moreover, the symptom of metrorrhagia often serves as a valuable guide. In acute pyo-salpinx the temperature is a guide, but it lends no aid in chronic cases. The effect of chronic disease on the ovaries is to render these latter rotten and pultaceous; the glands in such cases are useless in the female economy and their removal is clearly beneficial. The frequency with which blood-collections occur in the tubes has been much questioned; in the author's experience they are much more common than text-books would lead us to imagine. Referring to those cases in which hemorrhage from the uterus continued after the removal of the appendages, Dr. Savage was of the opinion that these cases did not often depend on imperfect removal of the ovaries and tubes, but he had no explanation to offer of the causes of such an accident. In the operation itself there should be no difficulty, except in cases where the disease was of old standing and strong fibrous adhesions were found to exist. No case ought to be beyond the skill and resource of an operator; cases which in former years he had himself left uncompleted owing to the difficulties of removal, he would now with his increased experience certainly finish; it was a reproach on our skill and dexterity if we allowed ourselves to be vanquished by the difficulties arising from old adhesions or matting of the tissues to surrounding structures. Now and then bleeding might be profuse, but it could always be controlled by pressure. In every case early operation was very desirable, and it was everything to catch the case at an early stage. Patients in whom the ovaries were adherent and buried in a mass of inflammatory exudation were most frequently the subjects of the operation, and next in order of frequency came the cases of distended Fallopian tubes. In opening the peritoneal cavity a short abdominal incision was desirable, because though it is a matter of small consequence whether the abdominal wall is divided for an additional inch or two, yet the longer the incision the greater the opportunity for septic absorption. Another advantage of a short incision is that the intestines are less likely to prolapse.

DR. MORE MADDEN also read a paper on

THE REMOVAL OF THE UTERINE APPENDAGES.

The operation for removal of the uterine appendages is indicated principally in three classes of cases: (1) In certain cases in which disease of the Fallopian tubes exists; (2) in some cerebral cases secondary to ovarian irritation; (3) in fibro-myomata of the uterus. No doubt could exist of the possibility of operating, and there could be no question as regards success, but the real point at issue was, with what degree of frequency ought the operation to be done. In deciding this question the consensus of opinion of gynecologists as a body ought to be taken, and the matter should not be left to the dictum of a few operators. There was no doubt that ovaries were being removed with growing frequency; as Dr. Carter had pointed out, the gynecologist removes a woman's ovaries with as little hesitation as a butcher spays his cows, and with about the same amount of regard for his patient. The operation, moreover, was not always successful in its results, for, to the author's own knowledge, many women in New York who were minus their ovaries and tubes still attend the hospitals and suffer as much as ever, if not more. In view of the fact that so many ovaries were about to be taken away, it was highly desirable that a discussion, ethical, moral, and surgical, should be held. In spite of all that had been said and argued to the contrary, the ovaries were to a woman what the testicles were to men, and to remove either without unsexing the patient was simply an impossibility. Childbearing was woman's function and woman's privilege, and every woman ought to be told the result of the operation before it was done.

The mere change of voice and growth of hair need not be weighed; there were other and far more important results. Considering the increased frequency of the operation one was bound to ask, Does this increased number of öophorectomies depend on an increased frequency of salpingitis, ovaritis, etc.? So far, Dr. More Madden had not found such to be the case. No one could say that ovarian and tubal diseases were disorders but lately recognized, for these complaints had been diagnosed and treated long before the present rage for operating had come in.

Even among modern operators there is much difference of opinion as regards the frequency with which öophorectomy should be done. The statistics of Sir Spenser Wells were interesting in this respect. The author's own experience, from observations made in the dissecting and post-mortem rooms as well as in practice, was that *grave* tubal or ovarian disease was rare; therefore he hoped to-day to hear some good reasons given why the operating mania should have so suddenly sprung up. In the causation of disease of the uterine appendages extension of septic mischief after delivery was the most common factor; next in order came gonorrhœa and catarrhal disease. In some of these cases aspiration would succeed, and in others, treatment leading to resolution.

Öophorectomy had its most useful application in cases of uterine myomata, though even here it should not be used indiscriminately in young patients. There was always one point to be borne in mind, viz., that a myoma did not usually lead to a fatal termination, while the same could not always be said of the operations for its cure.

In cases of old, quiescent fibroids an operation should not be undertaken, nor, again, in those cases where the ovaries might be expected to be found deeply placed behind the growth. It was probably useless for any one man to endeavor to stem the present epidemic of operating mania, but he felt bound to enter his protest; it would be a matter of deep regret if a useful operation

should fall into reproach, and become obsolete, because at present its most ardent exponents insisted on practising it in an indiscriminate and reckless manner.

Dr. Bantock thought that there were two great classes of disease in which removal of the uterine appendages was indicated: (1) When the appendages were the seat of some disease, such as pyo-salpinx, etc.; (2) when the appendages were healthy, but were removed for some neighboring disease. In the first class of cases, after rational and constitutional treatment had been tried, operative measures must be resorted to. A word of warning was necessary lest constitutional treatment should be too contracted, and so the result of the operation marred. In cases of papilloma of the tube, abdominal section was the only resource. If acute ovaritis, chronic ovaritis, ovarian cirrhosis, cystic degeneration of the ovary, or extreme atrophy of the ovary existed, the operation for removal was indicated. In all these conditions pain was a constant symptom. Acute ovaritis was so rare a disease that he had never seen a case of it; considering that during senility ovarian atrophy was always normally present, it was curious that such severe symptoms should arise from the above-mentioned cases of extreme atrophy. In the second class, in which neurotic diseases, epilepsy, etc.—were included, the operation was doubtful, and at best only tentative. To perform the operation in every case of insanity was certainly wrong; but if the disease arose or became intensified at the menstrual periods, operative measures might be tried. With small myomata, operation might be needed, but we must not overstep the boundary of prudence; in many of these cases dilatation of the cervix, scraping, and the application of iodine, or enucleation, ought first to be tried. Roughly speaking, one might say that if the tumor weighed two to three pounds and was growing quickly, then oöphorectomy was indicated; but if the tumor weighed only about one pound and was descending through the os uteri, the removal of the uterine appendages was unjustifiable. The operation had been done for dysmenorrhœa, menorrhagia, and displacements of the uterus, but in these cases it was certainly wrong.

Dr. Bantock protested against the excessive frequency of the operation, and felt that the warning note was needed. The case of the unfortunate Mr. Baker Brown was still in our memory, and served as an illustration of the necessity for caution.

Dr. Gordon, of New York, was of the opinion that in the question of operating every man must decide for himself; those who saw most of these cases would be the men most competent to form an opinion. It was not always possible to judge by physical signs; he had himself, in some cases, removed tubes and ovaries when there was absolutely nothing to be made before the operation by physical examination, and yet the success gained justified his decision. If operation is certified by result, then other men's *dictum* is worthless.

Dr. Elder, of Nottingham, wished that Dr. Savage had said more about alternative measures. To his mind the subject should be considered under three heads: (1) In connection with uterine myomata; in certain of these cases the operation was certainly called for. (2) Oöphorectomy for disease of the ovaries other than ovarian cystoma. In cases in which the ovaries are enlarged and adherent, and where menhorrhaga or metrorrhagia is present, there can be no doubt of the advisability of operating. In all cases the patient's friends ought to be informed of the proposed operation, and the effect ought to be clearly explained to them. In cases of extreme atrophy of the ovary removal was justifiable; but oöphorectomy for neuroses gave disappointing results. (3) Accumulations of blood, pus, or serum in the tubes, etc. In cases of hæmato- and pyo-salpinx operative measures were called for, but in every case the diagnosis ought to be based on objective as well as on subjective signs, and other treatment should have been given a trial first. The patient's consent must of course be always obtained.

Dr. Imlach thanked Dr. Savage and Dr. More Madden for their papers, and felt sure that discussion on so important a topic would be welcomed. In many of these cases of disease of the uterine appendages only two courses were open, either to cure your patient by operation or to send her home as incurable. It was not fair for men who were ignorant of, or had no experience in, these cases to offer criticism; a man ought to go to the Hospital for Women, either in Birmingham or Liverpool, and investigate for himself. Unjust criticism could always be met by seeing the cases referred to before they had been operated on, and again six months afterward. Disease of the uterine appendages might occur at any age, but pyo-salpinx was seen most frequently in young women. It was idle to say that women do not die of this disease; uterine disease, both chronic and acute, is a frequent cause of death. In every case Dr. Imlach made it a rule to explain to the patient all the risks and results of the operation. In cases of prolapsed ovaries he should not operate unless severe symptoms arose; in any case he did not remove the uterine appendages for ovarian prolapse, but preferred to stitch them up to the pelvic brim and so suspend them. The latter operation relieves pain, and occasionally has proved a cure for sterility. Men who only occasionally operated were much more likely to remove the appendages in unsuitable cases than those who had had greater experience.

Dr. Wylie agreed with the previous speaker. He had been one of the first in New York to take up the operation for the removal of the uterine appendages. Before commencing operative measures he had spent two years in perfecting his diagnostic skill, and even now he made a point of watching every case for some time before undertaking a surgical proceeding. At present he could always recognize cases of pyo-salpinx before operation. A man who was known as an operator would, of course, get more of these cases than other men. He made it a rule to preserve all appendages removed, and was then able to show them in confirmation of the necessity for operating. All great advances in surgery were sure to pass through a testing time.

Dr. Davies, of Liverpool, stated that the pathology of the tubes was a much simpler matter than that of the ovaries. In most cases of hæmato- pyo- and hydro-salpinx operation was needed, and nothing else would avail.

Dr. Wilson, of Baltimore, thought that the need of operative measures in many cases was undeniable; but the pendulum had probably swung a little too far. In cases of bleeding myomata of the uterus the latter organ should be opened up, the site and attachments of the tumor located, and then, if enucleation was impossible, oöphorectomy should be performed.

Mr. Lawson Tait agreed with all that had been said by Dr. Savage. He regretted greatly that so many misrepresentations had been made concerning the operation. Spaying was a mistaken term, as it implied the removal of ovaries before the onset of puberty. In the experience of men who had a special reputation for this operation the number of cases would, of course, be considerable.

Dr. Kelly, of Philadelphia, thought a protest was needed against over-frequent operating. He should always refuse to complete the operation, whatever the symptoms might be, unless he could find diseased tissue at the time of operating.

Dr. Graily Hewitt felt it would be difficult at present to lay down any hard or fast rule for operation. The question of diagnosis was all-important, and full care had been taken to perfect this. He dwelt on the chronicity of certain diseases in connection with the generative organs. Malnutrition of the body was often the great obstacle in obtaining a cure, and therefore attention directed to that point was urgently needed; the use of massage might be considered in this connection. Oöphorectomy was justifiable in some cases of chronic

displacement of the uterus. Much had been learned lately regarding the harmful action of gonorrhœa, especially when the latter had become chronic.

Dr. Vincent Jackson, of Wolverhampton, thought it would be a great gain if experienced operators would publish the results of these operations twelve to eighteen months after they had been done.

Dr. More Madden having briefly replied, a vote of thanks was given to the President, on the proposal of Dr. T. Savage, seconded by Dr. Gordon. The President conveyed the thanks of the section to the American visitors for the share they had taken in the work of the section, and Dr. Wilson, of Baltimore, briefly responded.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE BRADSHAWE LECTURE—COLLEGIATE RESIDENCE FOR MEDICAL STUDENTS—INSANITATION AT THE HOUSES OF PARLIAMENT.

London, August 21, 1886.

Not a very large audience assembled at the College of Physicians, on the afternoon of Wednesday last, to hear the annual "Bradshawe Lecture." The wisdom of fixing the date of its delivery at a time of year when only those are in town who cannot get away is more than doubtful. On this occasion the lecturer was Dr. Julius Dreschfeld, Professor of Pathology at the Victoria University, and Physician to the Manchester Royal Infirmary. At the best, Dr. Dreschfeld is not an orator calculated to "draw" a large audience. He is a practical physician, a skilled pathologist, and a scientist who keeps himself well abreast of the most recent advances in medicine; oratory, however, is not his *forte*, and the less said about his "delivery" as a lecturer the better.

Turning from manner to matter, more appreciation can be expressed. Dr. Dreschfeld took for his subject "Diabetic Coma." Sudden death, he said, was not uncommon in diabetes, yet the term "diabetic coma" was by no means applicable to all cases, though coma might be a chief symptom.

Thus coma might be due to cerebral hemorrhage. Acute croupous pneumonia might occur in diabetes and cause death without the usual pulmonary symptoms, the chief phenomena being dyspnœa and coma. Death in coma might result from interstitial nephritis complicating diabetes. It might also result from intercurrent affections.

The lecturer then went on to speak of the kinds of diabetic coma, and referred to a paper read by himself before the Midland Medical Society, in 1881. In this he had differentiated three chief forms. Twelve months later Frerichs had expounded the same views and adopted an identical classification.

The first of these forms had been recognized by Prout; it was that of "diabetic collapse." It consisted in the development of drowsiness, with extreme coldness of the surface, quick pulse, and shallow breathing. The urine contained from five to eight per cent. of sugar, a little albumen, but no aceto-acetic acid. Active delirium and convulsions were absent. The pupils, though sluggish, reacted to light. Death occurred, with falling temperature, in from ten to twenty hours. This form was most frequent in persons above forty who had suffered from diabetes for some time, and who were, as a rule, stout and well nourished.

In the second or "alcoholic form" of diabetic coma, the patient had all the appearance of acute alcoholic intoxication. Several cases of this variety were described. One was that of a middle-aged man who had been in hospital for diabetes. While walking in the garden he suddenly exhibited symptoms of alcoholic intoxication. Deep coma and death soon followed. The urine drawn from the bladder showed, besides sugar, a considerable amount of alcohol. It was clearly proved that the patient could have had no access to any alcoholic liquor.

POSSIBLE EXTENSION OF MALARIAL DISORDERS BY MEANS OF WATER-SUPPLY.

To the Editor of The Medical Record.

Sir: As you are aware, I have been pursuing the inquiry in regard to the possibility of the extension of malarial and intermittent fevers by the use of water from streams along whose banks diseases of this type are endemic. It is somewhat difficult to secure unbiassed testimony in regard to the matter, because of the implied interference with the "vested rights" of water companies. Nevertheless, it is for the interest of such corporations, as well as their patrons, that any evidence bearing upon this point should be examined carefully.

Recent researches in regard to the extension of cholera in Spain make it highly probable that running water does not readily purify itself, at least not so far as the contagion of cholera is concerned. There is ground for the belief, also, that the poison of typhoid may be conveyed long distances in running water. In the very nature of the case these diseases, propagated in this way, occur in localized epidemics, due to accidental contamination of the water-supply. A sudden outbreak of sickness of this sort naturally excites earnest inquiry in regard to its causes. The attention of sanitary authorities is aroused and a thorough investigation is begun at once. But in the case of diseases of a malarial type the condition of affairs is quite different. If water indeed serves as a vehicle for their conveyance, it is by a more gradual process. Years may be required to bring into general use the water from a public water-works, so that its full effect can be seen. The increase of the disorders in question has been so insidious that their source is overlooked. For this reason the problem is much more difficult than in the case of a single well-defined outbreak of disease, which may be shown to be plainly due to temporary contamination of the water in use. If, however, instances such as one within the knowledge of the writer can be shown to be not uncommon, it is evident that we have to deal with a very grave subject.

In a town of considerable size, which shall be nameless, the inhabitants years ago were, as a rule, entirely free from malarial diseases, except along the banks of the adjacent river. During the writer's acquaintance with this town, which was extensive and of long standing, he never heard of these diseases prevailing except in the immediate vicinity of the stream in question. Some years since a system of water-works was introduced, taking the water from this river, whose surroundings were positively and unquestionably malarial. Soon intermittent fevers and allied disorders begun to prevail throughout the town, and have not ceased so to do every year subsequently. Where once they were practically unknown they now are very common. It is as if the inhabitants all lived close to the banks of the stream. They have not gone down to the river, but the river has come up to them. Whether it is the use of such water for drinking purposes, or the saturation of the soil in various ways by its means, that may be presumed to extend these diseases, is to the writer as yet unknown. Perhaps further investigation may show that the case which has been described is of an exceptional character, but it certainly has impressed upon the mind of the writer the conviction that the subject is by no means unworthy of further research.

Yours, respectfully,

M. A. Veeder.

Lyons, N. Y., August 25, 1886.

IN REFERENCE TO "WHAT CAN WE CURE?"

To the Editor of The Medical Record.

Sir: It is hardly possible that the article under the above title in The Medical Record of August 21st will have no replies. If the term *cure* be used rather liberally, as by the correspondent from Missouri, surely the answer to this question may be, even in this day of pathological investigation, a large number of diseases. We are advised to "father no prescriptions," unless it be for opium or alcohol. Allowing due praise to opium in its various uses, it must still be the unfortunate hobby of a practitioner with whom it outweighs the whole materia medica. We will say nothing of the number of people who are its victims, even where its use was rationally begun. Besides opium, alcohol, and quinine, can we do nothing with aconite, bromides, digitalis, hydrargyrum, iodides, or iron? That collyriums have never cured acute ophthalmia is certainly untrue outside of Keytesville. I am one of those "fanatics" who occasionally "slander" alcohol, although admitting its power to keep the heart "wagging"—and the tongue as well. I believe that aconite and quinine, with or without cold sponging, have done as much by controlling the height of fevers as alcohol has done by supporting vitality during their decline. "A doctor's faith in physic is the measure of his intellect. It is always in inverse proportion." Is not, then, the surgeon's faith in the knife and ligature in inverse proportion to his intellect? When he sees a carcinoma let him rest with "confidence in God and nature" and leave it, as a certain Irish army surgeon preferred to leave bullets, to "festher oot." He says "the strife between nature and art in the cure of disease has resulted in a victory for the former."

Perhaps the opponent of nature in the strife at which the correspondent umpired was a *lack of art*, for true medical art has not been at strife with nature.

George S. Wright, M.D.

New Hartford, Conn., August 24, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 5 to September 11, 1886.

Wakeman, Wm. J., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for three months' extension, to take effect when his services can be spared in the Department of the Platte. S. O. 207, A. G. O., September 6, 1886.

Wales, Phil. G., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension to November 5, 1886. S. O. 70, Division of the Pacific, August 31, 1886.

Banister, Wm. B., First Lieutenant and Assistant Surgeon (recently appointed). To report by letter to the commanding general, Department of Arizona, for assignment to duty. S. O. 208, A. G. O., September 7, 1886.

Walker, F. V., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Adams, R. I. S. O. 131, Division of the Atlantic, September 8, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 11, 1886.

Woodruff, C. E., Assistant Surgeon. Ordered to Receiving Ship Vermont, October 4, 1886.

Atlee, L. W., Assistant Surgeon. Detached from the Vermont, and ordered to the Quinnebaug, per steamer of 25th inst.

Bogert, E. S., Medical Inspector. Detached from the Trenton, and placed on waiting orders.

Ferebee, N. McP., Surgeon. Detached from the Trenton, and placed on waiting orders.

Biddle, C., Passed Assistant Surgeon. Detached from the Trenton, and placed on waiting orders.

Scott, H. B., Assistant Surgeon. Detached from the Trenton, and placed on waiting orders.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 11, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	25	8
Scarlet fever	12	3
Cerebro-spinal meningitis	3	2
Measles	25	4
Diphtheria	35	12
Small-pox	0	0
Yellow fever	1	1

An Early Laparotomy.—Dr. T. E. Murrell, of Little Rock, Ark., writes: "Apropos of the prominence which laparotomy now holds before the medical world, I wish to call attention to a bit of oral history obtained through my father. When a boy, then living in East Tennessee, he heard a man named Bailey narrate to his father (my grandfather) the details of an operation performed by a surgeon on his (Bailey's) father, he himself assisting the surgeon in such way as he could. His father had been suffering for some days from obstruction of the bowels, and every available means failing to relieve him, and his condition growing more and more grave, the doctor decided to open his abdomen and see what was the matter. This he did, exposing the intestines and carefully examining them. He found one of the small intestines abruptly twisted upon itself, completely closing the lumen. This he unwound, and having replaced the bowels, sewed up the wound which he had made, and his patient made a perfect and speedy recovery, and lived many years afterward. From my father's age at the time he heard Bailey relate this circumstance, and the length of time the elder Bailey had been dead, and his having lived several years after the operation, he says it could not have been later than 1805, and perhaps several years sooner. My father was born in 1809, and has a most vivid recollection of what he saw and heard in boyhood. Living in a new and sparsely settled country, such occurrences were likely to become traditional. I have at long intervals questioned my father in reference to the above story, and he has invariably corroborated every detail in so far as was made known to him at the time when first heard, and, from the source, he does not question its truth. It is more than likely that we here have a case of ileus relieved by laparotomy, performed by a pioneer surgeon about or before 1805. I wish I had more direct testimony. Perhaps some *old resident* of East Tennessee, near the Virginia line, may be able to give it."

Denver Medical College.—We are sorry to note that this institution is at its old tricks again, viz.: advertising itself and secretary in the daily press. This is wrong; it is unethical; it is very bad taste; it is a violation of the spirit, if not the letter, of the code of ethics of the American Medical Association.—*Denver Medical Times.*

A Flameless Disinfecting Lamp.—The Paris correspondent of the *British Medical Journal* gives a description of a flameless lamp for disinfecting the sick-room. It consists of a spirit-lamp and a spiral thread of platinum about fifteen millimetres in length. In order to use the lamp, it must be filled with alcohol at about 90°. The wick is moistened, and the spiral thread, having been previously soaked in alcohol, is so placed that it surrounds the wick as closely as possible without touching it. This last precaution is essential. Then the lamp is lighted, and the platinum-thread immediately becomes red-hot. Two or three minutes afterward the lamp is put out by using a glass extinguisher. Currents of air must be avoided, as they make the lamp flicker, and the platinum-spiral is then exposed. As soon as the lamp is put out the extinguisher is removed from it; the spiral remains incandescent, and continues in this condition so long as there is alcohol in the lamp; it then gives out a sweet etherized odor, and the most mephitic air is quickly purified. In a smoking-room, where generally the smell of smoke is persistent, all odor disappears after the flameless lamp has been used. In order to understand this somewhat complex phenomenon it is necessary to remember that hammered as well as spongy platinum possesses, at a very high temperature, the property of condensing gas, and facilitating in its pores the combination of the oxygen of the air with combustible gases. The reflex action must not be forgotten; the heat given out by the spiral provokes an abundant evaporation of alcohol. The vapor of alcohol, in passing upon the incandescent platinum, is decomposed, and liberates its oxygen, of which part goes to increase the incandescence. Thus the incandescent platinum accelerates the evaporation of the alcohol, and *vice versa*. The rest of the oxygen which is set free spreads about the room, and renders the atmosphere wholesome. It is possible that the vapor produces ozone and aldehyde. The production of aldehyde is more probable than that of ozone. The manufacturer of this lamp asserts that ozone is produced when a small quantity of a liquid which he calls ozogene, and contains ether, is mixed with the alcohol.

Uses of Potassium Chloride.—At the recent meeting of the American Medical Association, Dr. A. F. Pattee, of Boston, communicated a paper on potassium chloride. He had used it in many cases of anæmia with success, and had also found it beneficial in the first stage of hepatic cirrhosis. Inflammatory exudations—*e.g.*, pelvic cellulitis—and glandular enlargements subsided under its use. In stomatitis it was equal to the chlorate. He had also used it in ovarian neuralgia and menstrual headache, where it was more reliable than the bromides. Combined with corrosive sublimate it was one of the best remedies for syphilis. In cellulitis he gave it in ten-grain doses every three hours. He had also used it in epilepsy, finding it most serviceable in anæmic cases.—*Philadelphia Medical News*, July 5, 1886.

Fluoride of Ammonium is recommended by Dr. J. Lucas, of Bombay, in the treatment of hypertrophy of the spleen. He states that it excels any other method of treatment with which he is acquainted. It is administered in small doses (five drops) of a weak solution (strength not stated), and given after meals to prevent a purgative or nauseant action.—*Prov. Med. Journal.*

Therapeutical Notes.—Professor Da Costa considers aconite *the* remedy for *cerebral congestion*, combined with the bromides and laxatives, or even bleeding in the severer forms. Professor Bartholow considers jaborandi the most efficient remedy we possess for *alopecia*. For local application, he combines with equal parts of soap liniment the fluid extract, or one part of fluid extract of jaborandi, one of tincture cantharides, and two of soap liniment. Dr. Neff still continues to be successful in the treatment of asthma with *pyridine*. He has now had fifteen cases in which he has used it, without a single failure. In several cases in which he has used it a number of times, the number and severity of the attacks have seemed to be lessened. Whether these are cases of *post hoc* and not *propter hoc* only a larger experience can decide.—*Coll. and Clin. Record.*

Turpentine in Malignant Tumors. — Professor Vingt, of Barcelona, employs a hypodermatic injection of one part of turpentine and two parts of alcohol in carcinoma and sarcoma, and has frequently succeeded in causing these neoplasms to disappear. A local inflammation, with fever, lasting eight days, was the usual consequent.—*Therap. Gazette.*

Long-continued Albuminuria. — We once asked Dr. Johnson how long he had known a case of albuminuria to extend. He replied, thirty years. We may safely conclude that a disease which could be extended over thirty years might, with more care, extend over forty, and leave life very much uncurtailed. But this implies great care on the part of the patient and physician alike.—*Lancet.*

A Question of Priority in the Treatment of Asphyxia of the New-born.—Dr. George H. Noble, of Atlanta, Ga., writes: "I was very much surprised to see, in The Medical Record of July 3, 1886, that Dr. L. N. Sharp, of Minneapolis, Minn., was claiming my method of treating asphyxia in the new-born from syncope or anæmia of the brain. I was surprised that the doctor did not give me credit for it, as my article upon that subject was published in the *Amer. Jour. of Obstetrics and Diseases of Women and Children* in April, and copied into *Gaillard's Medical Monthly* of May, and in the June number of the *New Orleans Medical and Surgical Journal.* I was surprised to see that parts of his article read very much like parts of mine; and further surprised to see that Dr. J. C. Roberts, of Pulaski, Tenn., was making a similar claim in The Medical Record of July 31st. I would therefore be pleased if you will kindly publish this note, that these gentlemen may know of *my priority over them both*, for I fear that they are not very extensive readers of the medical literature of the day. It seems that a man in the medical atmosphere that Dr. Sharp is would have access to all the leading medical journals of this country, though he may not subscribe to them. It sometimes occurs that the same thing is discovered by different parties about the same time, and it may be the case in this instance; nevertheless *I have the priority*—unquestionably."

The Watermelon Vine as a Source of Musk.—Dr. A. G. Chase, of Millwood, Kan., writes: "In a recent number of The Medical Record I called attention to the tip ends of the watermelon vine as a probable source of obtaining musk. I collected a quantity of the young ends and made an aqueous extract, evaporating to a waxy consistence. I have used it in the form of pills in two cases, as a nervine, with very prompt and decided action. I would like to call the attention of pharmacists as well as physicians to it, for further examination. I have been very partial to moschus for many years, in the nervous and hysterical symptoms of young girls."

Abortive Treatment of Mammary Abscess.—Dr. A. G. Chase, of Millwood, Kan., writes: "Dr. Eliot, of Washington, D. C., in The Medical Record of July 31st, speaks highly of spirit of turpentine as an abortive of mammary and other suppurations; and while I know it to be good, I would like to call attention to what I have found to be a much better remedy, to wit, extract of belladonna. I generally use the solid extract, rubbed up with enough simple cerate to soften; or paint with fluid extract of belladonna 3 ij., tincture of iodine 3 j. I never fail in arresting suppurative tumors when the application is made any time before the formation of pus."

It is better to be sure than sorry;
It is better to know than to worry.

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THE COEXISTENCE, OR THE COMPLICATION, OF ANAL FISTULA WITH PHTHISIS PULMONALIS.

ITS PATHOLOGY, TREATMENT, AND CURE, CONSIDERED WITH REFERENCE ONLY TO SUCH CONNECTION.

BY WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

THE subject of the association of anal fistula with phthisis, and the conflicting opinions concerning its treatment or non-treatment, when found thus connected, are of late being discussed, *pro et con.* This discussion reminds me that about forty years ago I paid some attention to this subject, and I feel disposed to give some of the views I then entertained concerning it to the profession now, for what they are worth.

The consideration of the copresence, or the complication, of fistula in ano with phthisis involves a most interesting and important point regarding its pathology, treatment, and cure; and it will be perceived that this subject has engaged the minds of some among the ablest men of our profession.

I will now introduce the subject by remarking that fistula in ano, when not connected with morbid conditions of the lungs, intestines, or other viscera, equally incurable and fatal, may be regarded as one of the most simple and satisfactory subjects of surgical practice. Indeed, it derives nearly all its difficulties and dangers from diseases that complicate or succeed it.

An anal fistula may exist in a phthisical patient without either disease becoming immediately complicated; for it is possible for the two diseases to exist in the same patient at the same time without either becoming involved in the other. Sooner or later, however, they may become involved to such an extent that neither can be cured. The two diseases may also be complicated, and stand in the relation of cause and effect, as they doubtless do in the majority of instances. Indeed, to repeat, an anal fistula may be associated with phthisis in two different characters—first, as a contemporaneous but independent accident, and secondly, as a consequence. Both diseases, too, may be produced by the same cause at the same time—that is, the same agent or low condition of the system which predisposes to the one will aid in the development of the other.

If the writings of the authors who have more especially studied the subject of anal fistula be consulted, it will be found that the earliest of them make no allusion to the disease being in any way connected with phthisis; and, although the more modern writers have adverted to the copresence of the two diseases, they have, for the most part, considered the phthisis in the light of a cause, instead of the consequence, of the anal fistula.

Now it must be admitted, by all accurate observers who have had much experience in the treatment of anal fistula, that it sometimes coexists with phthisis without exerting any favorable or unfavorable influence upon the latter, the two diseases being, as it were, independent of each other; and it must also be admitted that anal fistula is much more frequently complicated with phthisis, and is often the result of it, and when this is the case the two diseases may mutually react one upon the other, but unfavorably to each.

I will now show that, not only is the frequency of the connection of these two diseases denied, but when it does occur, the influence which one exerts over the other is also denied. As a confirmation of this, I will quote from the classical works of Laennec, Andral, Louis, Clark, Quain, and Gross:

M. Laennec says: "It is a common opinion, strengthened by the adoption of it by M. Bordeu, that phthisical subjects are particularly liable to fistula in ano, which helps to protract the termination of the disease. I have seldom observed this complication, and when it existed, it has appeared to exert no influence over the progress of the case." [1]

M. Andral says that he had met with only one instance of fistula in ano in eight hundred patients manifestly affected with phthisis in different stages, and he expresses a decided judgment against the commonly entertained opinion that this connection is frequent.[2]

M. Louis says: "I have not been any more successful than M. Andral, and I can readily account for the common error on the subject of fistula in ano in phthisical subjects by the habit, still adopted by medical men, of making analysis of their cases by the aid of memory—that is, of attempting impossibilities—and obstinately refusing to count in cases where it is obvious that that process cannot be dispensed with." [3]

Sir James Clark also says that, although he has often met with fistula in ano, he has not been able to trace any connection between it and phthisis further than its probable dependence on abdominal plethora, which so frequently precedes the latter malady.[4]

Mr. Quain says: "The belief which has long commonly prevailed, that there is a proneness to the formation of fistula in ano among persons laboring under pulmonary phthisis, has, like several other opinions resting on general impression, been shown not to stand the test of the strict observation of facts." [5]

Dr. Gross says: "It is a pretty common opinion that phthisis frequently gives rise to anal fistula, establishing thus, as it were, a sort of an issue which, by diverting from the affected organ, retards, as is supposed, the progress of the original malady. Respectable as the authority certainly is by which this notion is sanctioned, it is entirely at variance with the experience of every intelligent observer of the present day. The circumstance, I am convinced, is in a great measure, if not wholly, accidental; at any rate, I can truly say that it has rarely occurred in my practice, nor have I witnessed it more than three or four times in my dissections of phthisical subjects." [6]

The following extract of a letter, addressed to the writer, is from the late and lamented Dr. W. A. McDowell, who during his life treated more cases of consumption than any other physician in the Mississippi Valley:

"EVANSVILLE, IND., October 3, 1851.

"DR. BODENHAMER:

"DEAR SIR: Yours of the 29th ult., relative to complications of fistula in ano with phthisis, was duly received. That the complication is frequent, and that the

[1] A Treatise on the Diseases of the Chest, and on Mediate Auscultation, translated from the French by John Forbes, M.D., pp. 294. 8vo. New York, 1830.
[2] Clinique Médicale de Leminier, tome iv. 8vo. Paris, 1823.
[3] Pathological Researches on Phthisis, etc., translated from the French by W. H. Walshe, M.D. Second edition. 8vo. London, 1845.
[4] A Treatise on Pulmonary Consumption, pp. 163. 8vo. London, 1835.
[5] On the Diseases of the Rectum. Second edition, pp. 124. 12mo. New York, 1855.
[6] Elements of Pathological Anatomy. Second edition, pp. 461. Imp. 8vo. Philadelphia, 1845.

fistula exerts a salutary influence over the phthisis, I believe is the general impression of the medical profession. Yet I am not able to furnish you any valuable personal experience on the subject, never having met with the complication but twice in the whole course of thirty-two years' practice. In one of these cases both diseases were cured, the fistula first; in the other both diseases continued unto the death. Yet the well-known irregularity of the bowels in phthisis, the relaxing influence of diarrhœa and the alternate irritation of constipation, would seem necessarily to conduce more than ordinarily to anal ulceration; but the idea of any beneficial influence from this, or from any other intestinal irritation, in the treatment of a disease in which so much depends upon the condition of the digestive functions as phthisis does, is unexplained, and I think inexplicable. If the revulsive influence of a counter-irritant were necessary, I should prefer to establish it upon any other part of the body," etc.

Statistics.—With regard to the question of the frequent or the infrequent occurrence of anal fistula with phthisis, I will cite Mr. Allingham, of St. Mark's Hospital, London, who, in a very able article on "Fistula in Conjunction with Phthisis," says: "For my own part, I am quite convinced that a very considerable percentage of fistulous patients have more or less tubercular lung affection. I have endeavored to find out what the percentage is, and have carefully gone over a period of nine years in private practice, from 1871 to 1880, and find that, out of 1,632 cases of fistula seen by me during that period, 234 had phthisis, either active or latent." [1]

According to an estimate I myself made in 1860, with special reference to this very question, I found that, out of nine hundred and sixty cases of anal fistula which came under my immediate observation during a practice of nineteen years, that is, from 1841 to 1860, seventy-three cases were accompanied by well-marked phthisis in its several stages, from its inceptive to its advanced or confirmed stage. The anal fistula in fifty-five of these cases seemed evidently to have been the result of the phthisis. It may be remarked that the discrepancy with regard to the ratio of such cases, which has been noticed, may perhaps be owing to the fact that those surgeons who treat the diseases of the rectum as a specialty are more apt to see more of them, and notice them more particularly, than the general practitioner, or those who have declared that they have seldom seen them.

The relation between anal fistula and phthisis.—The next question is: Is there any relation or connection between fistula in ano and phthisis pulmonalis when these two diseases coexist in the same patient, and, if so, can it be explained? Some authors maintain, as I have already shown, that no such connection exists between them; and, if there is such, they deem it inexplicable. Now, that there is such a relation or connection between the two diseases, when thus associated, is a point in pathology which may be easily traced, explained, and established. It is well known that there is a large amount of the cellular membrane which invests the inferior extremity of the rectum; that this tissue in this vicinity has a large number of veins; that these veins, in the advanced stage of phthisis, can have but little adventitious support, in consequence of the great absorption of fat in such cases, the emaciation of which is always strongly marked in the adipose cellular membrane and muscles. Tubercular deposits in the lungs, too, must in a greater or less degree interfere with the return of the blood from the veins; and the constant impulse communicated to the anal region by coughing must also greatly tend to the production of anal abscess and anal fistula. Indeed, disease of the lungs, and especially tubercular degeneration, is that which most commonly gives rise to abscess and fistula of the anus; and this may also be accounted for by the well-known tendency which exists to ulceration of the intestines in phthisis, or to retarded venous circulation, as already stated. From these several considerations, and the proneness to suppuration in the cellular tissue of the rectum, we can at once account for the connection, as well as the frequent occurrence and concurrence of these diseases with phthisis pulmonalis.

Are anal fistulæ natural emunctories?—I will now quote the opinions of some distinguished authors who consider anal fistulæ, when coexistent with phthisis pulmonalis, as natural emunctories, and therefore should not be treated or interfered with in any way, but let alone, believing that these two diseases are in sympathy and have a mutual dependence upon each other. As a proof of this they say that when the fistula first forms the lungs are always at once relieved. The phthisis is immediately suspended in its destructive course, and as long as the fistula keeps open and continues to discharge freely so long is the patient respited. When these authors speak of an operation in these cases they mean the knife operation.

M. Velpeau says: "Experience proscribes the performance of the operation for fistula in ano in consumptive patients, first, because in most instances the fistula moderates the progress of the pulmonary disease; second, because it is usually caused by the ulceration of one of the thousand tubercles with which all the organs are then cribbled; third, because the wound rarely heals up, but suppurates abundantly, and reacts in an injurious manner upon the ensemble of the organism; and, fourth, because if by chance it closes up, it is remarked that the pulmonary affection, which was momentarily suspended, rarely fails to become thereby aggravated." [1]

Dr. Bushe says: "From what we have said when treating of stercoraceous abscesses, it is very apparent that a great many of them depend upon disease of the lungs; therefore, when they degenerate into fistulæ we should not operate on them, else their healing will give rise to an increase of the pulmonary disorder and curtail life. There are also other sympathetic fistulæ which it would be improper to meddle with, as those depending upon disease of the uterus and spine, as well as those which occur in the last stages of other organic diseases." [2]

M. Ribes observes, in his inimitable essay, that, according to his experience as well as that of others, the fistula in ano in phthisical subjects should remain undisturbed, and that it is not only useless, but even dangerous, to subject such patients to the operation.[3]

Sir Astley Cooper says: "Often, before a person perishes from phthisis he has a fistula in ano, and this is the reason fistula is considered as a dangerous disease, although in reality it is not so, but it is the consequence of the more important diseases which destroy life. The surgeon often brings discredit upon himself by operating in these cases in the last stage of phthisis, when no operation ought to be performed and when it is impossible the disease can be cured; therefore that death, which is the result of pulmonary disease, is falsely attributed to the fistula in ano." [4]

Mr. Colles says: "Are there any circumstances, general or local, that should deter us from venturing on relieving a fistulous patient, who is also suffering from phthisis, by the knife operation? There are both. I mentioned to you that experience proved, in particular instances of fistula in ano, a connection or sympathy between the local disease and grave pulmonary affections; now, if you meet a case of this kind, never attempt to operate if you find on inquiry that the patient had a chest affection for some time, that there came on the local complaint about the rectum, and that on its appear-

[1] Fistula, Hæmorrhoids, Painful Ulcer, and other Diseases of the Rectum. Fourth edition. p. 57. 8vo. London, 1882.

[1] Mott's Velpeau, vol. iii., pp. 1131. Imp. 8vo. New York, 1847.
[2] A Treatise on the Malformations, Injuries, and Diseases of the Rectum and Anus, pp. 249. Imp. 8vo. New York, 1837.
[3] Mémoires de la Société Médicale d'Émulation de Paris, tome ix., pp. 116. 8vo Paris, 1826.
[4] Lectures on the Principles and Practice of Surgery. Edited by Mr. Frederick. Tyrrell. Fifth Edition, pp. 294. Imp. 8vo. Philadelphia, 1839.

ance the other complaints were relieved; any operation that you perform for that man's fistula would hasten his death."[1]

M. Lisfranc is of opinion that it is very improper to operate for anal abscess or for anal fistula in phthisical subjects, for that death from phthisis in all probability will succeed the cure. He further states that he has often seen natural emunctories prolong the life of phthisical patients for a greater length of time than those established by art.[2]

It will be perceived, from the very able and distinguished authors I have presented—and many more might be named—that they fully confirm the popular prevailing opinion in the profession, that anal fistulæ, when associated with phthisis, are considered as natural emunctories and highly beneficial to the lungs; and that it is not at all justifiable to attempt the treatment or the cure of the fistulæ in patients suffering from phthisis, or in those predisposed to it.

It was this theory that induced the celebrated Baron Heurteloup, of Paris, a number of years ago, to believe that artificial fistulous drains or exutories would be equally as beneficial to consumptives as the spontaneous or natural ones represented by the fistulæ; and it was this belief that caused him to practise, at the Hôpital de la Charité, the operation of establishing artificial fistulæ in tuberculous patients in whom no anal fistulæ existed. This practice in his hands, however, met with no success; the derivative effect of the anal irritation made no decided impression upon the lungs. Those, however, who believe in the beneficial effects of the natural fistulæ in phthisical patients, do not admit that artificial substitutes will ever answer any good purpose. The benefit, however, resulting from the establishment of an artificial drain does not depend upon the large quantity of the discharge, but upon the degree of irritation that is caused and kept up upon the surface; hence, in my opinion, artificial drains are much better than the natural ones, so called, as they are completely under control and may be located and regulated exactly to suit the nature of the case. Had Baron Heurteloup established an exutory upon the chest instead of a seton in the anus of his phthisical patients, he might have benefited them more. It is strange that any intelligent physician would ever think of establishing a drain in the anal region to relieve phthisis.

The plausible theory that an anal fistula is salutary, and a derivative remedy in phthisis and must be let alone, as contended for by authorities, is, in my opinion, a serious error, and has proved so in numerous instances. It is true, I have seen patients in the advanced stage of phthisis apparently benefited on the first appearance of an anal fistula; they were unexpectedly, as it were, restored to better health, and their pulmonary affection became quiescent for the time being; but the improvement proved not to be permanent; it did not last long; the discharge from the fistula either continued to increase, or it dried up, and the patients, sooner or later, sunk. As a general rule, anal fistulæ greatly aggravate the pulmonary affection by impairing the constitutional powers, especially if attended by a copious discharge of pus and much irritation. The principal indication in all such cases is to build up, not to deplete.

I have never seen a case of phthisis, in any stage, cured by a fistula in ano, or even the life of such prolonged to any length of time, and, according to my experience, it never does any permanent good in any instance. All such cases, therefore, should have the advantage which a proper and judicious treatment offers, recollecting that an anal fistula may more frequently be the primary cause of phthisis than the cure or the mitigation of it. I have yet to see the first bad results from attempts at curing both diseases in such patients by proper treatment. It is true that in all cases in which the fistula appears in the last stage of phthisis, which is not uncommon, when all hope of the patient's recovery is gone, it would be improper, as well as useless, to attempt its cure, if, indeed, it could then be done; that is, if a phthisical patient with an anal fistula, in whom the phthisis has made rapid and serious inroads upon the respiratory organs—especially if attended by hectic irritation, profuse sweats, cough, colliquative diarrhœa, etc., and the fistula not painful, distressing, nor discharging too freely—no prudent surgeon would institute such operative proceedings for the treatment of the fistula that would in the least be calculated to shock the nervous system and to impose an additional burden upon the vital functions.

Differential diagnosis.—Some of the diseases of the pelvic region, especially anal abscess and anal fistula, sometimes produce, in weak and emaciated subjects, hectic fever, night sweats, cough, expectoration, and great physical and mental depression. Such cases are sometimes diagnosticated as phthisis by superficial observers, when no organic disease of the lungs really exists. In such the anal fistula is let alone, and allowed to reduce the vital powers of the patient by keeping up a copious and constant drain upon the vascular system, and a continued irritation of the nervous system, respectively; so that in course of time the lungs also become seriously affected, and death is sooner or later the result. This is no imaginary occurrence, as I could here report several such cases that came under my own observation.

Bronchitis.—Chronic bronchial catarrh sometimes simulates tuberculous phthisis so closely that it is well calculated to deceive, especially if attended, as it sometimes is, by persistent cough, expectoration, loss of color and strength, shortness of breath, and in some cases even hectic fever, night sweats, and diarrhœa. I have treated successfully a number of cases of anal fistula associated with chronic catarrh of the bronchiæ, which had been previously pronounced confirmed phthisis, and all treatment of the fistula interdicted on penalty of speedy death from phthisis.

Tuberculous disease of the rectum.—It is said that tubercles in the lungs are essential to their existence in other organs—that is, that they are always developed in the lungs first. But this is not always so, for I myself have, in several instances, found them, or what are commonly called tubercles, in the glands of the rectum when their existence could not be diagnosticated in the lungs. They seemed in these instances to have been developed in the glands of the rectum first. As a general rule, however, whenever they are developed in any one organ, they invade all others; doubtless originating in the lungs in the majority of instances.

Tuberculous degeneration of the rectum requires prompt and energetic treatment, or it will speedily result in ulceration and fistula; and it is the disease commonly called consumption of the bowels, and often attended by many of the symptoms of tubercular phthisis—which it very much simulates and in which it ultimately terminates unless timely arrested. Here the disease originates in the rectum, but subsequently terminates in the lungs, the rectal disease being the primary affection. On the contrary, however, it is well known that in protracted phthisis the rectum becomes greatly attenuated, all its coats being thinned and wasted, and sooner or later diarrhœa sets in, and patches of ulceration of the mucous membrane take place. These ulcers vary in form and size, being mostly circular depressions in the mucous membrane and not large; when they occur low down, between the internal and external sphincters of the anus, they are almost certain to result in abscess and fistula. These ulcerations in the rectum are by no means uncommon in phthisical subjects, and are, with their concomitants abscess and fistula, one of the complications of phthisis. Here the primary disease is phthisis, and the ulceration, the abscess, or the fistula, whichever obtains,

[1] Lectures on the Theory and Practice of Surgery. Edited by Mr. S. McCoy. Pp. 275. 8vo. Philadelphia, 1845.
[2] Journal des Connaissances Médico-chirurgicales de Paris, 1835.

is the effect or the consequence of it. This plainly shows the connection between the two diseases.

There are, however, other ulcerations of the rectum almost identical in character with those already described, which are independent of phthisis, being the result of other chronic affections, as the ulcers which are known to occur in the last stages of low fevers, in chronic dysentery and diarrhœa, or in persons of a lax, lymphatic, and scrofulous constitution. Such ulcers, if not cured, are liable sooner or later to result in abscess and fistula in ano, and ultimately in phthisis in those predisposed to it.

Treatment.—Now, the most important and practical point for the surgeon to consider in this controversial affair is not whether anal fistula and phthisis are seldom or often found in the same patient, or whether, when thus found, there is an intimate or no connection between the two diseases; but it is whether anal fistulæ, when found in phthisical patients, should be let alone or treated, and if treated, by what method. These are the important points.

Before treating a case of fistula in ano, the surgeon should never neglect to ascertain to a certainty whether or not pulmonary disease is present in the case. If phthisis or a strong predisposition to it exists, which a careful physical exploration of the chest will always disclose, the treatment, if any, must be regulated to suit the case.

It is an established canon of surgery that, in order to cure an anal fistula, it must be cut—that is, divided with the bistoury; and it is also equally a law of surgery that when an anal fistula is complicated with phthisis it must not be cut, but let alone.

In accordance with the theory of non-treatment in such cases, the patient is advised not to have anything done for the fistula, as any interference with it, or the cure of it, would only accelerate the pulmonary affection and hasten his death. It is strange, passing strange, that with the abundant resources of the present advanced stage of surgery all surgical treatment of the anal fistula in such cases should be proscribed. I readily admit that to attempt to cure such cases by the knife operation would be highly improper, and it was doubtless in reference to this operation alone that this opinion was first advanced, and not to other proper and judicious surgical measures, of which there are certainly such.

The practice of the non-treatment in the cases under consideration, as advocated by the authors I have cited, and by others equally distinguished, is, however, happily and surely becoming antiquated. There is not one good reason to be urged in its favor, except in those cases in the last stage of phthisis. The views of authors generally upon this subject are anything but clear and sagacious; although able and highly distinguished, as they most certainly are, they too often allow themselves to adopt certain fanciful theories of disease, and strive too much to confine nature within definite bounds and arithmetical calculations.

In the several cases of phthisis I have named, which are at all proper for surgical treatment of the fistula, I prefer the operation by ligature to that by the knife; it has never been productive of any injury in my hands, but, on the contrary, in producing the most happy results, as I could, had I the space, illustrate this article by a large number of well-authenticated cases. I am therefore decidedly of the opinion that if any surgical operation for the fistula be adopted, it should not be by the knife, but by the ligature; for the method by the ligature is much safer and judicious, for if it does not tend to cure the phthisis, it does not at least accelerate its progress; whereas the method by knife in such cases must prove injurious in the highest degree, both in its present and future consequences. We are therefore neither justified nor warranted, by either experience or reason, in operating with the knife in such cases.

The knife operation requires the patient to be placed under anæsthesia, which is contra-indicated in phthisis; it also requires the patient to be confined to his bed and his room for a longer or shorter period; whereas when the ligature is employed no confinement is required; he can be up and about and in the open air all the time. This is of the greatest importance in the treatment of phthisical patients.

The ligature, if properly employed, does not cut or divide the fistulous sinus at once as the knife does, but it works its way through the tissues by a process of ulceration and suppuration, and not by a cutting process; indeed, it does not cut at all in the sense of the knife operation. It must be admitted, too, that the process is a healthy one, by all who understand the *modus operandi* of it and that of setons and issues. I have had abundant evidence, both from clinical observation and physiological experiment, of its great utility in the particular cases I have mentioned.

In operating by the ligature, the tightening should be effected by twisting instead of by a knot, for a knot cannot be regulated nicely or exactly; it is either made too tight and causes too much irritation and pain, or it is not made tight enough and does not succeed well. The process, too, of tying the knot frequently is attended with trouble and with pain; whereas the daily twisting of the ligature is easily made and exactly regulated, so as not to be too tight and painful, yet at the same time quite efficient.

I never hesitate to operate by the ligature in these cases, unless the lung affection is very far advanced; and even in such cases no harm to the chest difficulty will result from the ligature properly employed, or used as a seton. But in extreme cases the fistula should not be laid open, either by the ligature or by the knife, for if this is done the divided parts might not heal, and the patient left in a much more miserable condition than before, especially if he was suffering from diarrhœa. By the use of the ligature, however, this serious mistake need never occur, for the process of tightening must be conducted slowly, as a test, so that if granulation and healing did not promptly follow in the wake of the ligature, which can easily be ascertained from time to time, the tightening of the ligature could at once be stopped, and the continuity of the sphincter ani and parts preserved, the ligature either being removed or used as a seton. Indeed, if the surgeon should find, by the slow use of the ligature in such a case, that the sinus was not filling up and healing, and the patient not improving, but getting worse, he could at any time stop its use without doing any harm whatever. This cannot be done when the knife is used.

249 Madison Avenue.

Blindness and Fecundity.—It has been asserted by Magnus, Fuchs, and others, that children, one or both of whose parents may be blind, are very liable to be themselves blind. Magnus investigated fourteen instances of married couples in whom one or both were born blind, or became blind at an early age, and found that, out of thirty-four children begotten of these marriages, eight, or 23.5 per cent., were either blind or weak-sighted. Mr. Simeon Snell reports, in the *British Medical Journal* of August 7, 1886, thirteen instances of marriages, one or both the contracting parties being blind, in which none of the children had any trouble with the sight nor any trouble with the eyes. He noticed one curious fact, however, and that was the small proportion of births. There were ten men with sighted wives, and excluding one whose wife had ceased to bear children before his blindness came on, there were left nine, with twenty-six children between them, or less than three per family. Adding to this number three blind couples with two children, there was a total of twelve with twenty-eight children, or two and one-third per family. It would almost seem, therefore, that such marriages are less than usually fruitful. Farr placed the number of children per wife in England as 5.2.

IS ELECTROLYSIS A FAILURE IN THE TREATMENT OF URETHRAL STRICTURES?

By ROBERT NEWMAN, M.D.,

NEW YORK.

The electrolytic action (electrolysis) of a galvanic current on animal tissue is an undisputed chemical fact. Its application in the treatment of urethral strictures, practised by me for the past eighteen years, has been recognized almost universally, and followers of my method report success in thousands of cases. Good results have been reported by eminent medical men, *e.g.*, Belfield, Hutchinson, Farrand, R. Morris, Prince, Frank, Glass, Martin, and a number of others. We may add to these recent reports of distinguished surgeons of London, for example, W. E. Steavenson and W. Bruce Clark. A method so favorably spoken of naturally had many imitators, and it is not surprising that amongst these were many medical men illy prepared to do the operation successfully and totally ignorant of the proper procedure; their dominating idea being that any electrical instrument, used in any arbitrary manner, ought to give brilliant results, and failing in accomplishing these, they condemn and ridicule all reported cures by expert and careful operators.

In former papers on this subject I have tried to point out that failure in the cure of any given urethral stricture by galvanism was due to a number of causes, among the most frequent of which were the following: 1, Incompetence of operator; 2, mismanagement of the whole case; 3, wrong diagnosis; 4, faulty instruments.

I. *Incompetence of operator.*—To succeed, the operator must be an accomplished surgeon and electrician, knowing the difference between a galvanic and an induced current, in the first place; and, secondly, having some knowledge of the different results obtained by each current on animal tissue. An accomplished surgeon must he be, so as to be able to lightly introduce instruments into a diseased urethral canal and safely guide them through all parts of an abnormal or pathological passage.

The science of electricity belongs to the elementary course taught in our literary schools, and every student of medicine is expected to know all about the different actions of divers batteries. No one is competent to discuss what electrolysis might do and what it might not do unless he can tell an induced current from a galvanic circuit. Alas! how many of our medical men know when either current is indicated in the treatment of any disease requiring electricity? Hear what a professor of medicine in a provincial town says:

"Our students do not need and *would not understand* the higher and special branches of medicine, for they have no preliminary education. They come from their villages, some direct from the ploughshare; they go back again to their villages, where it is sufficient to treat fevers, zymotic diseases, bowel complaints, and to manage confinements. These branches they are taught, and if they need more let them come to us for consultations and operations."

This is one reason why many medical men look upon the treatment of disease by electricity as a sort of charlatanism—they do not know what it is because they have not been taught it at their schools. Now, do our best medical colleges in large cities give their students any better chance? I am not aware that any college has ever appointed a professor to the chair of electrical therapeutics, or that even electrolysis has been practically taught anywhere. As a curious fact I may mention, however, that the only professor of surgical electricity can be found in the Homœopathic College, in New York.

I will append the gist of a few letters that reach me almost daily, in support of my statement that the greater part of our profession are in ignorance of the uses, and even of the definition, of electrical currents.

Letter 1 asks: "How many cells shall I use of an eighteen-cell Kidder battery for *curing* stricture of the urethra by electrolysis, and how apply the bougies?"

Letter 2 writes: "How many cells of the battery do you generally use, and what size of a bougie?"

Letter 3 wants to know if the gravity battery is not best, and if he may use as an electrode a *rubber* catheter.

Letter 4 insists on using an electrical machine *to turn with a crank*, and as his two hands are engaged thereby, thinks one pole in the urethra is sufficient, asking, of *what use is the positive pole*, when the negative does the work?

Letter 5 reports that he has used such strong currents, that the patient *screamed with pain*, and notwithstanding the result was not satisfactory.

Some of these would-be operators do not even moisten the sponge, others *oil* their electrodes. I am surprised that even a reputable text-book on electricity advises to use the *positive* pole at the seat of the stricture, which must inevitably ruin the patient's urethra.

In my former articles, the modus operandi, how to use the galvanic current, the application of the poles, the strength of current, the duration of the séance, the intervals of application, and all minutiæ have been so exactly described that such ludicrous questions not only show the ignorance of the inquirer, but prove that he has not even intelligently read my articles. He has simply understood, in a misty way, that electricity can be used for curing strictures, and being disappointed at his want of success insists that the method is a delusion and a snare.

I cannot refrain here from mentioning a letter just received by a gentleman in Canada, who has studied electricity and its application in medicine and strictures.

He writes: "I meet with a great deal of scepticism and ridicule from my professional brethren. A professor in a medical college here walked up to me in a drug store and ridiculed my attempt to electrolyze some enlarged glands of the neck in a young man, and flauntingly offered to *bet* me $50 to $5 that I could not cure him, or do him any good. Nevertheless the neck is improving markedly. A professor of therapeutics argued with me that all batteries were alike, and the little old-fashioned crank-machine as good as any, but that they all did more harm than good. The professor of medical jurisprudence took a case away from me, telling the patient that electricity would do more harm than good. The professor of surgery asked me how I knew that destruction of tissue takes place in electrolysis," etc.

This ignorance and blind opposition is not only confined to teachers of medicine in Canada, but, in the face of daily accumulating facts, there are men in high standing in the United States who oppose the progress of electrolysis with an obstinate ardor that borders on vindictiveness. Thus we see the first cause of failure: "Incompetence of the operator."

II. *Mismanagement.*—Others, though having enough knowledge of the subject, will fail on account of carelessness; they do not give time to the details, are without any perseverance, and easily become discouraged if their first trials do not give them a perfect result. The following extract is from the letter of a prominent physician:

"April 10, 1885.—Assisted by Dr. B., who loaned me his battery, I pass a No. 9 (English) electrode through the stricture, but the patient was unable to bear the pain, even with only six or seven cells. Ether was administered, and with eleven cells I passed a No. 9 steel sound into the bladder.

"April 12th.—Passed a No. 8 (English) sound, this made the stricture bleed.

"April 13th.—Patient complained of chills and fever; ordered quinine. (N. B.—This was an attack of urethral fever, which passed away in a few days.)

"May 12th.—While absent from the city patient had an attack of retention, which was relieved by a catheter.

"May 22d.—Passed a No. 8 sound, much to patient's surprise. The stricture bled again.

"May 23d.—Electrolysis with ether as before. No. 10 was passed into the bladder, but only after the steady use of twelve cells for a long time.

"May 28th.—Passed No. 10 English catheter, drew off urine, followed by another chill.

"May 29th.—Still experiences some pain on micturition."

The doctor, in treating the foregoing case, violated nearly every rule which would lead to success.

First, he passed an electrode which gave pain; pain should not be given under any circumstances. If soreness is already present this is to be removed by appropriate remedies.

Second, he did wrong to give an anæsthetic, which follows from the foregoing—where there is no pain an anæsthetic is not required. The patient should be able to express his feeling as a partial guide to the operator.

Third, the current used was entirely too strong in this case. Eleven cells may be used perhaps in exceptional cases, where the battery fluid is weak and cells and elements small. Six cells would have been fully sufficient.

Fourth, more than one electrode was passed at a single sitting. The invariable rule is that no two instruments should be passed, even for several days after the operation.

Fifth, two days later an English sound was passed, making the stricture bleed, which showed that damage was being done to the urethra. Why No. 8 was selected after No. 9 had passed two days previously I cannot understand. The object is to enlarge the calibre of the urethra, during each subsequent sitting. This treatment also brought on two attacks of urethral fever, which will never happen with proper care.

Sixth, instead of allaying pain and irritation the doctor made matters worse, by using the sound and producing more irritation.

Notwithstanding all this mismanagement the patient and doctor were pleased with the improvement. One year later the operator wrote me, however, that the case did not turn out as well as he could have wished. He acknowledged his errors and reported other more successful cases.

I will conclude this article with some rules, as a safe guide for practitioners who wish to adopt the treatment of electrolysis in stricture of the urethra, which will also serve as answers to numerous questions received from correspondents.

1. Any good galvanic battery will do which has small elements and is steady; the twenty-cell Drescher battery, carbon and zinc, is an excellent instrument, sufficient, particularly, for the beginner.

2. The fluid for the battery ought not to be used too strong.

3. Auxiliary instruments, as galvanometer, etc., are important to the expert, but not necessary for the beginner.

4. For the positive pole a carbon electrode is used, covered with sponge, moistened with hot water, and held firmly against the cutaneous surface of the patient's hand, thigh, or abdomen.

5. For the absorption of the stricture the *negative* pole must be used.

6. Electrode bougies are firm sounds insulated with a hard-baked mass of rubber; the point is a metal bulb, egg-shaped, which is the acting part in contact with the stricture.

7. The curve of the bougie is short; large curves are mistakes.

8. The plates must be immersed in the fluid before the electrodes are placed on the patient, and raised again after the electrodes have been removed.

9. All operations must begin and end, while the battery is at zero, increasing and decreasing the current slowly and gradually by one cell at a time, avoiding any shock to the patient.

10. Before operating, the susceptibility of the patient to the electric current should be ascertained.

11. The problem is to absorb the stricture, not to cauterize, burn, or destroy tissues.

12. *Weak currents at long intervals.*

13. In most cases a current of six cells, or from two and a half to five milliampères, will do the work, but it must be regulated according to the work to be done.

14. The séance should be at intervals, not too frequent in succession.

15. The best position for the patient to assume during the operation is that which is most comfortable for himself and the operator. I prefer the erect posture, but the recumbent or others may be used.

16. Anæsthetics I like to avoid; I want the patient conscious, so that he can tell how he feels.

17. Force should never be used; the bougie must be guided in the most gentle way; the electricity alone must be allowed to do the work.

18. During one séance two electrodes in succession should never be used.

19. All strictures are amenable to the treatment by electrolysis.

20. Pain should never be inflicted by the use of electrolysis; therefore it should not be applied when the urethra is in an acute, or even subacute, inflammatory condition.

III. *A mistaken diagnosis* is another fruitful source of disappointment with many. It stands to reason that where no stricture is present, but some other disease of the urethral mucous membrane, and this is energetically treated with the galvanic current, no cure can result, and even some harm done. Still some have reported unfavorable to the efficiency of the current where there never was a stricture present. The following have been mistaken for stricture to my knowledge: Spasm of the bladder; the encroachment on the calibre of the urethra by an enlarged prostate; granulations and ulcers of the urethra; urethral abscesses, etc. Some tumor, neoplasm, or calculus may cause impediment to the flow of urine and be mistaken for stricture by the neophyte. Chancroidal and syphilitic conditions may still more complicate the diagnosis. I will give in brief one of these troublesome cases, which occurred in my own practice. Patient came from the South, entirely broken down, to be treated for stricture. Three were found, respectively 1 inch, 3½ inches, and 6½ inches from the meatus.

During June, 1885, his condition and general health improved under treatment. Electrolysis materially improved the two deeper-seated strictures, but the anterior one was not favorably influenced by the current, on the contrary, the induration spread toward the meatus.

July 11th.—Stricture close to meatus very much indurated, firmly matting together mucous membrane and subjacent tissues. Electrolysis was applied and succeeded in softening the tissues beyond my expectation. I was able to pass a French No. 25 well and for fifteen minutes; with six cells applied the current.

August 1st.—Stricture worse, scarcely admits No. 18 bougie, and submucous tissue hard and callous. I now put my patient on the mixed treatment, and it was astonishing to see the callous appearance vanish, and now the remaining stricture was easily removed by the current.

September 26th.—No. 26 French can easily be passed. A year later re-examination proved the complete cure.

Now I could understand why a friend of mine, who was well pleased with his results in deeper-seated strictures, kept complaining to me that he did not get favorable results whenever he treated strictures situated in the immediate neighborhood of the meatus, but that they would recontract, and sometimes become worse after treatment, notwithstanding the greater care taken and my rules literally followed. Taking into consideration that this gentleman took most of his cases from the venereal class of a hospital, the solution of the difficulty was easy in the light shed on it by my own case.

These cases are not so simple as they may seem to the readers of this paper, for in many of them no secondary symptoms can be discovered, nor will the patient admit, or know of, the probability of a syphilitic infection.

IV. *Faulty instruments* certainly may become a cause of failure, though an expert operator may partly overcome this cause by the skilful handling of even rude instruments. Nevertheless, a careful man will select the best instruments as an important factor to his success. A good outfit consists of: A *galvanic* battery, with conducting wires, sponge electrodes, connecting screws, bougies à boule, and a full set of electrode bougies. The latter should have a proper curve, must be smooth and well polished, and well insulated, except at the bulb. The latter, again, must have the proper size and shape. A set of tunnelled electrodes and a few auxiliary instruments complete the set.

The electrodes may be either curved or straight, the bulbs acorn- or egg-shaped. I prefer to have them with short curves. The tunnelled electrodes are of invaluable aid in strictures of small calibre, and if used properly will make false passages a fable of the past.

For a further description of the instruments used by me, and the modus operandi, I refer to my former articles, particularly to THE MEDICAL RECORD of August 12 and 19, 1882, and to *The New York Medical Journal* of January 3, 1885. The question asked so frequently as to the number of cells used cannot be answered more definitely than the dose of morphine to be given in different diseases can be answered by any one dose. The operator must select the strength of the current for each individual case.

It would certainly be desirable to express the quantity of electricity in positive numbers, but at present we have not yet uniform and reliable galvanometers. While I advise weak currents of about six cells, this measure does not express a fixed quantity, and at best is only relatively correct. The amount of electricity to be used depends partly on the work to be done, and also on the nature of the stricture. In the practical application other facts must also be considered; for example, the state of the atmosphere, whether it be humid or dry, exercises great influence on the current. In clear, dry weather six cells may do the work for which on an unfavorable day ten or more cells would have to be used. Even if we had a universal system of measuring our currents it would not be of any practical benefit in these cases, for the exact amount a patient could endure would have to be determined afresh at every sitting by the operator, for the patient will sometimes bear much less at times, and then, again, he will not be affected by a much stronger current.

There may be other reasons of failure, but I have already touched on so many that other causes will easily suggest themselves to an intelligent surgeon.

To judge from the many causes which might operate to produce failure in this treatment, it may seem very difficult to produce many good results. Such, however, is not the case, and with care and good management failures are the exception. All depends, as in every other operation, upon the skill and the talent that is brought to bear upon each case. In support of this let me cite a short report by a physician. He writes from Rockaway, N. J.:

"A gentleman came to me suffering from chills, following the repeated trial of passing an impervious stricture by Professor N——. He said the doctor had failed to pass any instrument whatever into the bladder, and had that day given up in disgust. I proposed electricity. He consented, and on examination I found three strictures, located deep in the urethra, two-thirds the distance to the bladder. The first sitting was prolonged to twenty minutes, a No. 8 acorn-shaped bougie being used at the seat of the stricture. I did not succeed in engaging it. One week later the seance was repeated in the same manner; did not succeed in passing to bladder. Two weeks later I used a straight tip in place of the acorn-shaped one, and succeeded in passing this through a corkscrew-shaped stricture one and three-eighths of an inch in length. At the next seance I passed readily a No. 10 bulb, acorn-shaped. Since then I have succeeded in obliterating it to such an extent that I can scarcely feel any constriction on passing the instrument. Patient has never had a chill or any untoward symptoms after any of the sittings."

The case speaks for itself. Here a professor, whose skill in using instruments is undoubted, was unable, at nine trials, to pass any instrument into the bladder, and acknowledged his incapacity to do it. By the aid of electrolysis another doctor, probably not as skilled in the manipulation of instruments in the urethra, succeeds.

Now, in conclusion, electrolysis of urethral strictures *must* and *will* succeed, in proper hands, in every case that is intelligently and judiciously undertaken. The operation itself needs a clear head, a steady hand, fingers which both see and feel, patience, and good discrimination in the application of the strength of current and length of sitting. In the strictest sense of the word, there *can be no failures* in dissolving away the dense tissue that constitutes a stricture, for electrolysis is based upon a fixed chemical action of the constant current on these animal tissues. Electrolysis cannot fail, but operators may, and do.

68 WEST THIRTY-FIFTH STREET.

LAVERAN'S MALARIAL GERM.

BY E. C. CARTER, M.D., ASSISTANT SURGEON U.S.A.,
COLUMBUS BARRACKS, O.

As the attention of the medical profession has been recently directed toward the supposed parasitic origin of malarial fevers, no apology is necessary for this paper.

Patient No. 1,753 was admitted into the Post Hospital at Columbus Barracks, O., August 16, 1886. The patient was a negro man, aged twenty-six. He had been employed for the past two years as a cook, most of the time on board a boat which plied between Cairo and St. Louis.

When admitted into hospital he was suffering from a well-marked chill, which was followed by fever and sweating. The diagnosis of tertian intermittent fever was made. No quinia was administered, but the fever was subdued by antipyrin and acidulated drinks, and the bowels moved by a dose of calomel, sodium bicarbonate, and rhubarb, five grains each.

On August 17th the patient had a slight rise of temperature about the hour at which he had had the chill on the previous day.

On August 18th, about half an hour earlier than on August 16th, the patient had a severe chill, and during the paroxysm three specimens of his blood were taken and immediately placed under the microscope. These specimens were prepared in the following manner, suggested to me by Dr. Kinsman, of Columbus, O. The glass slides and thin covers were first carfully cleansed in water acidulated with hydrochloric acid, and then washed in stronger alcohol. A thin ring of pure vaseline was made on the slide. The diameter of the ring was somewhat smaller than that of the circular glass cover. A finger of the patient's right hand was carefully cleansed with stronger alcohol, which was allowed to evaporate. Then a narrow rubber band was placed tightly around the finger, about an inch from its extremity. A slight prick of the lancet in the finger's end was followed by the appearance of a small drop of blood. A glass cover was applied to the surface of the drop without touching the finger, and immediately placed over the vaseline ring on the slide in such a manner as to have the blood dropped adhering to the cover within the ring.

On placing one of the specimens under a one-eighth inch objective the following bodies were observed: Nu

merous red and some white blood-corpuscles, and several almost transparent bodies about the size of the red corpuscles. These bodies seemed to be surrounded by a membrane less transparent than its contents and presented the following appearances: These were at first globular and contained a few dots, which were in motion among themselves. At the end of two minutes they had assumed an oval shape, still containing dots, and two minutes later they had assumed the appearance of slightly curved, short cylinders, containing a few dots. Several similar bodies were observed later, which assumed a more fixed globular shape, and did not become cylindrical. Other bodies were observed which contained dots and had several thread-like bodies attached to them. These were longer on one side than on any other. These bodies moved in their entirety; their dots moved among themselves, and there appeared to be a waving movement among the transparent filaments.

This last-described body ultimately got near enough to a red blood-corpuscle to apparently touch it with its longer filaments, and then all of its movements ceased. These bodies were observed by Major Charles R. Greenleaf, Surgeon U.S.A., as well as by me. A careful examination, five or six hours after the one recorded, failed to demonstrate these bodies to Dr. Kinsman, Dr. Greenleaf, and myself. It should be stated, however, that the blood had thoroughly coagulated before this examination was made.

The administration of quinia in full doses soon removed all malarial symptoms; and after the administration of the quinia no more bodies of the kind described were observed.

Clinical Department.

OPERATION FOR HARE-LIP SUCCESSFULLY PERFORMED UNDER COCAINE.

Dr. A. H. Goelet, of 243 West Fifty-fourth Street, reports the following: Miss Mary N——, eighteen years of age, had a shallow though very disfiguring cleft in the right side of her upper lip, which she desired to have corrected by operation. It was decided to use cocaine, although the patient was timid and sceptical in regard to the full anæsthetic properties of the drug. Assisted by Drs. Cutler and Kinch the writer performed the operation on July 7th. One assistant compressed the coronary artery between his thumb and finger at either angle of the mouth, and the cocaine was injected hypodermatically in the vermilion border on either side of the notch, ℥viij. being used on each side, and the operation was commenced within two minutes. The lip was transfixed near the border on the left side of the notch, and the incision carried to the apex of the cleft. The same was done on the opposite side, and the flaps drawn down. The projection being too great at the margin of the lip, the flap was cut obliquely through, a small piece removed, and the coaptation was made perfect. The whole was neatly sewed with fine iron dyed silk which had been sublimated in a solution of 1 to 1,000. One hare-lip pin was introduced near the vermilion border, the wound dusted with iodoform and sealed with flexible collodion. Over this were placed several layers of antiseptic absorbent gauze, which was held in place by a strip of rubber adhesive plaster from one cheek to the other.

The pin was removed on the third day and the other sutures on the fifth day, when union was found to be perfect and complete. There was very little œdema.

The patient experienced no pain during any step of the operation (which occupied nearly three quarters of an hour) except that occasioned by the prick of the hypodermatic needle. A sponge was placed in the mouth and with the co-operation of the patient, who kept it pressed against the front teeth, the blood was prevented from reaching the throat.

Those who have experienced the difficulties of this operation under ether will readily appreciate the advantages of this method, which insures perfect quiet and the co-operation of the patient.

The projection at the margin of the lip which was intentionally left at the time of the operation has now disappeared and the result is perfect.

FAILURE OF LARGE DOSES OF ANTIPYRIN IN A CASE OF SUNSTROKE.

Dr. M. Singer, house surgeon of St. Mary's Infirmary, Galveston, Texas, reports the following case: "A man, name unknown, aged about forty, was brought to St. Mary's Infirmary on August 5, 1886, at 6 P.M. At about three o'clock in the afternoon he had been found lying unconscious in the street by a police officer who, supposing him to be drunk, took him to jail. Two hours later the jailer, noticing the deep coma and intense bodily heat, had him conveyed to the hospital. Upon admission the pulse was 120, full and strong; respiration, 40, stertorous, with short intermissions about every five minutes; temperature, 108.4°. Skin hot, dry, and parched; coma complete; pupils slightly contracted. I gave fifty grains of antipyrin under the skin, applied sinapisms to extremities, and ice on the head. At 7 P.M. the patient's condition was unchanged, every symptom as before. Gave ten grains of antipyrin under the skin.

"At 8 P.M. the patient's general condition remained the same, except that he had passed his water in bed. Pulse, 122; temperature, 108.8°. Gave hypodermic, twenty grains of antipyrin. At 9.30 P.M. symptoms unchanged, except for the temperature, which now was 109.8°. The excessive heat of skin could well be felt through the patient's shirt and the bed sheet. Gave hypodermic, twenty grains of antipyrin.

"At 11 P.M. pulse 140, weak; temperature, 109.8°; respiration 18, stertorous, puffy, sometimes catching and irregular.

"Patient died at 11.30 P.M. Temperature at time of death, 110°; post-mortem temperature taken three-quarters of an hour after death, 108.5°; pupils slightly dilated. The temperature in this case was taken in the axilla. No other antipyretic measures were employed but those metioned above. I have used the same preparation of antipyrin in many febrile conditions, and in doses of from twenty to thirty grains, without failing at any time to reduce the fever heat. In this case, however, one hundred grains of the drug given under the skin within a period of three and a half hours proved to be utterly worthless. No diaphoresis was produced at any time after the administration of the remedy."

INTESTINAL OBSTRUCTION FROM AN UNUSUAL CAUSE.

Dr. E. T. Gould, of Sonora, Cal., writes that he was called on the morning of June 27th in consultation upon a case of obstruction of the bowels occurring in a patient fifty-eight years old. Laparatomy was advised, but as the attending physician did not concur in this it was decided to use morphine hypodermatically in sufficient doses and with sufficient frequency to produce entire freedom from pain for forty-eight hours, and then to give a full dose of castor-oil. The treatment was ineffectual and death occured on June 30th. Five hours later the autopsy was made. The cause of the obstruction was found to be strangulation of four feet of the ileum by a loop of diverticulum. The diverticulum, an inch and a half in length, was from the ileum, and its tip had become adherent to the bowel as a result of previous inflammation. It was located three feet from the ileo-cæcal junction.

POISONING FROM CORROSIVE SUBLIMATE IN OBSTETRICAL PRACTICE.

DR. P. J. CLARK, of Oakland, Neb., writes: "I have the misfortune of adding another case of intoxication from corrosive sublimate to the already long list which I see reported in THE MEDICAL RECORD of July 10th. On November 19, 1885, I attended a case of difficult labor and delivered by podalic version. The uterus was washed out by a solution of bichloride of mercury, 1 to 1,000, and all seemed to go well until the third day, when the patient complained of considerable pain. This was quieted by morphine, and the vagina irrigated twice daily with a solution of the bichloride, 1 to 1,000. In a few days the patient complained of great pain in the abdomen, and suffered from profound depression of the nervous system and salivation. She had been very restless and could not sleep for several nights before, and now she said she was going to die. The irrigations with the solution were discontinued, and chlorate of potash was administered. In a week the woman had entirely recovered. I was very much surprised at the time, as I had never met with such an experience before and had seen no case reported. I would not use as strong a solution again.

CIRCUMCISION UNDER COCAINE—IMPROVED OPERATION.

DR. E. R. PALMER, Professor of Physiology in the University of Louisville, writes that, desiring to perform circumcision under cocaine, he determined to use Corning's method of sequestration. "The patient, a young man, twenty years old, with a complete congenital phimosis, was seated in a chair, and the penis was seized by my assistant and drawn upon firmly. A Martin bandage, seven-eighths of an inch wide and a yard and a half long, was next applied, the first turn being made behind the scrotum to prevent slipping, and the bandage being then wound tightly back and forth from the symphysis pubis to the corona and back again. An ordinary hypodermatic syringe was next filled with a six per cent. solution of cocaine, and the needle, directed toward the extremity of the penis, was passed at four different points through the skin over the glans, a fourth of the contents of the syringe being discharged each time into the subcutaneous tissue. No attempt was made to introduce the drug from the mucous surface. In about three minutes I began adjusting a Rogers clamp, occupying as many more minutes in getting it placed to suit me and screwed down. The prepuce was removed with one stroke of a pair of long curved scissors, and the clamp removed. The dorsal artery was found not bleeding; the frænum was not cut. The mucous membrane was split up, and some eighteen sutures leisurely introduced. The bandage was now removed and, contrary to expectation, no hemorrhage ensued. Less than a drachm of blood was lost during the entire operation. The wound was dressed loosely with absorbent cotton wet with equal parts of listerine and water. Not a twinge of pain was felt after the last needle-puncture had been made. The young man, of nervous temperament, was at first quite pale, but later assisted in the stitching, and as he washed his hands after the operation remarked that his penis still felt dead. The wound healed in forty-eight hours by first intention.

"The advantages of the bandage are several: It wholly controls bleeding, it localizes the action of the cocaine, and it increases the facility with which the penis can be handled during the operation. The reverse direction for application, that is, from behind forward, will be found the best, because the easiest, and fully effectual."

Dr. Palmer adds that he performed the operation a second time in the same manner with equally good results as regards anæsthesia. But the continuous suture was used, and although perfect coaptation was accomplished, some trouble was experienced later from swelling and from syphilitic induration of the parts. It was attempted to remove the suture but this was found impossible, and the writer thinks it would have been better had interrupted sutures been employed. The case is now doing quite well, however, and the result will be good.

THE VALUE OF REPEATED OPERATION IN MAMMARY CARCINOMA.

DR. C. DEADERICK, of Knoxville, Tenn., reports the following instructive case: "In May, 1878, I was called, in consultation with two other physicians, to see Mrs. E. L. M——, a lady fifty-eight years old, who had an infiltrating scirrhous cancer of the breast. The disease had been in progress about two years (she had nursed her husband a few years before, who died of cancer) and was far advanced, nearly the whole breast being involved, as well as the axillary glands on that side, which were very much enlarged. A rough ulcerated and bleeding surface, about two and a half inches in diameter, covered the most projecting portion of the tumor. The patient's general health was extremely poor. There was loss of appetite, great emaciation, nausea, and feebleness. Taking everything into consideration, the case did not seem to be a favorable one for surgical operation. There was one point upon which we all agreed, viz., that she would not live through the summer without surgical interference, but upon the matter of the propriety of a surgical operation we could not agree. The attending physician took positive ground against it. The writer took positive ground for it, and our colleague said he would sustain either one of us. This "dead lock" necessitated the calling of a fourth, Dr. J. M. Boyd, who decided with the writer. Accordingly on May 26, 1878, I, assisted by Drs. J. M. Boyd and J. P. Park, removed the whole of the diseased breast and all of the enlarged axillary glands. The prostration of the patient, after the operation was completed, was such that we thought it imprudent to remove her from the operating table for several hours.

"The wound healed promptly, but in July following a nodule, about as large as a filbert, developed near the cicatrix, and on July 23d, after freezing the parts with rhigolene spray, I removed it. Again, on August 21st I removed another small lump from near the edge of the cicatrix, but at a different point; again, on October 20th, another from a point two inches above the outer end of the cicatrix; again, on February 17, 1879, another from near the edge of the cicatrix; and finally, on May 21, 1879, another, an inch and a half above the middle part of the cicatrix.

"After that the disease seemed to be exhausted, and there was never any evidence of a return of it. After the first operation the patient's health improved very much and continued good for several years; but her constitution was always delicate, and at the time of the original operation she was prematurely old physically.

"About eighteen months ago her general health began to fail, and she died in her sixty-sixth year, August 9, 1886, of marasmus, having lived seven years two months and nineteen days after the last removal.

"Taking into consideration the general condition of the patient and the advanced condition of the disease, the result was extraordinary, and is a strong argument in favor of the knife *persistently* used in removable cancer."

THE PRAIRIE ITCH.

DR. JOHN F. LOCKWOOD, of Batavia, Ill., writes that while living in Central Wisconsin he had several cases of the so-called "prairie itch," or "Michigan itch," and always succeeded in curing it by the following: Acid. sulph. dil., 3 v.; tr. nucis. vom., 3 ij.; elixir simpl., q. s. ad ℥ iv.;

dose, a teaspoonful three times a day, half an hour before meals whenever there was any acidity. Several writers in *The Medical Age* maintain that the disease is merely a variety of scabies, and state that they have always obtained a speedy cure by the use of some form of sulphur externally applied. And Dr. Hope, in a recent number of THE MEDICAL RECORD, writes that his experience with the disease in Kansas was very similar.

CORROSIVE SUBLIMATE IN THE TREATMENT OF PURPURA HÆMORRHAGICA.

DR. R. A LANCASTER, of Gainesville, Fla, writes: "A short time since I had a patient suffering from a severe attack of purpura hæmorrhagica. There were well-marked purpura spots larger than buck-shot scattered over the body, limbs, forehead, and roof of the mouth. There was also free and persistent hemorrhage from four decayed roots of teeth on either side of upper and lower jaw. In spite of the heroic use of all the recognized hæmostatics and astringents, both internally and locally, the bleeding continued for seven days. Having tried all the remedies that I had ever heard recommended, with apparently no result, I decided to try the local application of a strong solution (1 to 240) of the bichloride of mercury.

"The mouth was well rinsed with this, and pledgets of cotton wet in the solution and applied to the bleeding surfaces.

"The bleeding was at once arrested and convalescence established. This result would seem to support the 'germ theory' of this disease. The patient was so low and so nearly bloodless that the hemorrhage may have been about to cease of its own accord, but if I should ever have another such case to treat I shall certainly give the remedy a further trial—both locally and systemically."

CONSTITUTIONAL SYMPTOMS FROM COCAINE

DR. FREDERICK S. WILLIAMS, of Puyallup, Wash. Ter., reports a case of operation for lacerated cervix uteri in which, as the patient objected to ether, cocaine was used. A pledget of absorbent cotton, saturated with a twenty per cent. solution of cocaine, was placed over the cervix, and after a time the edges of the laceration were pared without giving rise to any pain. Then four minims of the same solution were injected on each side of the wound. No pain was felt from the needle-punctures, but in about a minute and a half the patient began to speak as if with an effort, saying, "I feel as faint," and gasped as if struggling for breath. She was immediately placed on her back, with head lowered, and told to breathe deeply.

She obeyed for a few times, then recommenced her gasping, which she continued for about a minute. Then followed shallow breathing for four or five minutes, when she began to rally a little, and the breathing became gradually stronger but irregular.

Her pulse at first was very rapid, irregular, and weak, then became during most of the time of the shallow breathing almost imperceptible, gradually returning with the approaching normal respirations.

Consciousness at once was dulled, and during the period of the shallow respirations was completely lost.

At the end of about ten minutes she rallied, her pulse, respirations, and consciousness returning to their normal condition. She was then very much frightened, and asked what time it was and about her children, stating she had been asleep and felt numb all over. These symptoms were, as manifested, uninfluenced by drugs or stimulants, as none had been given, except a dose of potassium bromide at the beginning. Dr. Williams then proceeded with the operation, and introduced three stitches without any further mishap. There was very little hemorrhage from the cut surfaces. The patient stated that some of the medicated applications to the uterus had pained her more than did the operation.

CONGENITAL MALFORMATION OF THE EXTERNAL EAR.

DR. E. H. JONES, of Weyauwega, Wis., writes: "In THE MEDICAL RECORD of August 7th Dr. T. R. Williams, of Beechtree, Pa., relates a case of congenital malformation of the external ear which was very similar to one occurring in my own practice. On January 3, 1886, I delivered Mrs. F—— of a healthy male child weighing about eight pounds. The nurse calling my attention to the right ear, I found upon viewing it posteriorly it appeared to be perfect, but an anterior view revealed the fact that the meatus and folds of the cartilaginous portion were completely obliterated; the tragus was also wanting. The parts were covered by integument of the same character as that of the cheek, with the exception that two small warts were situated near the site of the closed meatus. The child has remained perfectly healthy, never having shown any symptoms of trouble arising from the closed ear."

TREATMENT OF ASPHYXIA OF THE NEWBORN.

DR. EDWARD REYNOLDS, of Boston, Mass., referring to the mode of restoration of asphyxiated infants by suspension by the heels, writes: "I wish to describe a method in which I have great confidence, which combines the advantages of this position with a most efficient and yet gentle, artificial respiration. The child lies on its back, head downward, upon the operator's forearm held nearly perpendicularly to the floor, and is retained there by his fingers, which are hooked over its shoulders. In this position the child's arms fall downward by the sides of its head, and their weight, aided by that of the thorax itself, at once draws the ribs into the position of complete expansion of the chest. If, now, the thorax be compressed against the forearm by the other hand and suddenly released a most satisfactory respiration is the result. This method, combining as it does the advantages of an afflux of blood to the brain with a most efficient artificial respiration and an easy escape of fluid from the trachea, seems to me well worthy of a more extended trial, especially as my experience with it, though not very large, has been most satisfactory."

IODOL IN OCULAR THERAPEUTICS.—Iodol is a combination of iodine and of pyrol. It is a grayish powder, containing eighty-five per cent. of iodine, and possesses the properties of iodoform without its disagreeable smell. It may be employed either as an ointment, with an equal weight of vaseline, or in alcoholic solution with glycerine. It is but very slightly soluble in water. According to M. Trousseau, in a cummunication made by him to a recent meeting of the Société de Thérapeutique, excellent results have been obtained from its employment as a pomade in cases of blepharitis with ulceration, in affections of the lachrymal passages, and in chronic conjunctivitis. On the other hand, it has but slight effect in acute conjunctivitis. The ointment is much superior to the yellow precipitate one in phlyctenular or granular conjunctivitis, and in chronic (torpid) ulcers of the cornea. In fine, iodol is superior to iodoform by its marked anæsthetic and antiseptic properties, and by its rapid influence upon the cicatrization of rebellious ulcers. —*Dublin Journal of Medical Science*, July, 1886.

Progress of Medical Science.

PERIPHERAL NEURITIS IN LOCOMOTOR ATAXIA.—The history of peripheral neuritis has been enriched in the past few years by numerous works which have had the effect of causing a modification of some of the views formerly held as to the pathology of tabes dorsalis, and as to the pathogeny of certain complications of this affection. MM. A. Pitres and L. Vaillard have reviewed, in an article in the *Revue de Médicine* for July, 1886, a number of cases hitherto recorded, and have added a report of five coming under their own observation. From a study of these cases they are led to conclude that: 1. The peripheral nerves in tabes are often the seat of inflammatory changes. 2. Neuritis in this disease does not differ in any of its anatomical characters from other recognized forms of the non-traumatic affection. 3. The topographical distribution of this inflammation is very variable; it may affect the sensory nerves, the mixed nerves, or the visceral nerves. 4. In most cases, though not in all, it begins at the terminal extremities of the affected nerves. 5. The extent and gravity of the neuritis bear no constant relation to the duration or the extent of the medullary lesions. 6. The complication plays no part in the production of the specific symptoms of tabes, such as the lightning pains, ataxia, abolition of the patellar reflex, etc. These symptoms would seem to be due to the sclerosis of the posterior roots and of the posterior columns of the spinal cord. 7. On the other hand, certain irregular symptoms, occurring at times in locomotor ataxia, seem to have a direct causal relation to peripheral neuritis. Such are: *a*, the areas of cutaneous anæsthesia or analgesia; *b*, the trophic cutaneous affections, perforating ulcers, various eruptions, falling of the nails, etc.; *c*, certain motor paralysis, with or without muscular atrophy; *d*, arthropathies and spontaneous fractures. 8. The visceral crises occurring in locomotor ataxia are also, perhaps, in certain cases, the consequence of neuritis of the corresponding visceral nerves.

PARALYSIS AGITANS WITHOUT SHAKING.—Dr. Beevor related several cases of paralysis agitans without tremor, in a paper read before the Medical Society of London. In these cases, fixed attitude, rigidity of the neck, with difficulty in looking up, expressionless countenance, slow delayed movements, difficulty in rising from the sitting posture, monotonous and mumbling speech, were present. The writing in nearly all the cases was wavy; retropulsion, apropulsion was frequently present. Charcot, Buzzard, and Gowers have published cases of this kind. It seems possible for paralysis agitans to run its course without any tremor being present.—*Birmingham Medical Review*, July, 1886.

CONGENITAL BILATERAL DISLOCATION OF THE RADIUS.—Dr. R. Heelis reports the following case in *The Lancet* of August 7, 1886: A boy, eight years old, was brought to him on account of trouble with the arm. Examination showed a dislocation of the left radius, which was easily reduced; but any slight motion would throw it out of place again, especially pronation. In complete flexion the dislocation was reduced; it could easily be reduced by manipulation in any position of the forearm, as the joint was so loose and there was some lateral movement possible in the humero-ulnar articulation. The right radius was partially dislocated—that is to say, only about one-fifth of the circumference of the head rotated on the external condyle of the humerus, the rest projecting behind and to the outer side of the joint. This dislocation was irreducible—at any rate, unless considerable force was employed. The external humeral condyles on both sides appeared to be unusually small, hence the difficulty of retaining the dislocated bone on the left side in position. The dislocation therefore was similar on both sides, being outward and backward. When the arms were extended there was a considerable projection on the outer and upper part of both forearms, produced partly by the outward dislocation and partly by the disproportionate development of the supinator longus. All the normal movements could be performed by both forearms, but pronation and supination, especially the latter, were very weak, and their place was usually taken by movements of flexion and extension. The patient seldom used his right arm, which was less muscular than the left. The existence of some deformity had been noticed by the parents since his first year, and even from birth. There was no history of any accident to the boy or to the mother during gestation, or at delivery, which was normal.

TUBERCULOSIS OF THE TONGUE.—There are two forms of lingual tuberculosis, the primary and the secondary, both of which are rare, but the former especially so. Secondary tuberculosis of the tongue is usually met with in the latter stages of pulmonary phthisis, and occurs in the form of superficial and dirty-looking ulcers, which are exceedingly painful and add greatly to the sufferings of the patient. The primary form is a very uncommon affection, or at least it is so considered, though it may be that this belief has arisen from mistakes in diagnosis, lingual tuberculosis having been regarded as carcinoma and reported as such. Dr. G. Feurer reports two cases of the disease in the *Correspondenz-Blatt für Schweizer Aerzte* of August 15, 1886, and the following description is taken from his article: The muscular tissue is very seldom the seat of tubercular disease, and this is the explanation of the freedom which the tongue enjoys, for of all muscular structures it is the one most frequently attacked. Primary lingual tuberculosis occurs usually in individuals who have acquired or inherited a predisposition to the disease, but who are as yet free from the specific lesions in other organs. In addition to a more or less characteristic, often granular, ragged, and dirty ulcer, there is a deep infiltration in the substance of the tongue. This infiltration consists of a number of more or less sharply defined nodules, the size of a millet-seed, either isolated or lying closely together. Sometimes these become agglutinated into a whitish-gray, transparent, or cloudy mass, presenting an appearance like that found sometimes in tuberculosis of the testicle. Microscopical examination shows these nodules to be tubercles with all their histological characteristics. Tubercle bacilli are also present. There may, in certain cases, be such a marked swelling of the tongue as to completely fill the mouth, showing the marks of the teeth and interfering with speech and mastication, and presenting the picture of a subacute glossitis. At times there is fever of a hectic type, and the patient's general health becomes seriously depressed. There is usually considerable pain, which is increased by attempted mastication. The pain is, however, localized, and the radiating pains, to the ear and elsewhere, such as are commonly noticed in carcinoma, are absent. This is due, the author says, to the fact that while cancer spares no tissues, but invades all, nervous as well as others, which lie in its path, tuberculosis adheres to the connective-tissue spaces and affects the other tissues only indirectly in interfering with their nutrition. The submaxillary glands are infected in tuberculosis of the tongue, but they are never enlarged to such an extent as they are in carcinoma. The disease occurs probably by direct infection through wounds of the tongue, for if the bacilli were brought through the blood-channels, they would probably be arrested in other more predisposed organs. In both of the cases observed by Dr. Feurer there had been wounds of the tongue which did not heal, and in the immediate neighborhood of which the infiltration commenced. The treatment of lingual tuberculosis consists in the early removal of the diseased foci, and of the swollen glands in the submaxillary region. The prognosis is as yet unsettled. In some cases there has been no return of the disease, after a number of years.

either in the tongue or in other organs. In one case of the author's the patient died, four months after the operation, of meningitis, apparently tubercular, though an autopsy was not made. Usually, when the lingual affection has not been removed the disease has in time attacked other organs, generally the lungs or intestines.

Potassium Permanganate in Burns and Frost-bites.—Dr. A. A. Züboff writes in a Russian journal that, having tried potassium permanganate in upward of sixty cases of burns and frost-bites, he has arrived at the following conclusions: 1. Permanganate of potash, in the shape of frequently changed compresses (linen or hygroscopic cotton-wool soaked in a solution of one or two grains to an ounce of water), is an effective remedy for frost-bite of the first and second degrees. 2. The same lotion acts as successfully in burns of the first degree. 3. It is less successful in burns of the second degree. At all events, the permanganate lotion rapidly relieves inflammation around blisters, and pain, and prevents suppuration when blisters remain intact. In this category of cases it is advisable to employ a weaker solution (half a grain, or even less, to an ounce). Two cases are given in detail. One of the patients received (when taking a vapor-bath) a scald of the first degree, extending from the breasts to the inguinal folds anteriorly, and between the same levels posteriorly. Pain disappeared within an hour after the application of the permanganate lotion. Soon the epidermis began to peel off. She was cured within eleven days. Another woman had a similar scald of the face and a hand. She also obtained rapid relief, the treatment lasting a week.—*London Medical Record*, August 16, 1886.

Inversion of Uterus with a Large Fibroid.—Dr. Goossens, of the Rotterdam Hospital, mentions, in a Dutch medical journal, an interesting case of inversion of the uterus complicated with a fibrous tumor of the wall. The woman was first admitted into the hospital in 1881, for menorrhagia which had lasted for three years, or since her last confinement. On examination, a large tumor was found in the vagina, the base being evidently within the uterus. By means of bimanual exploration, the organ was felt to be enlarged and hard. While the surgeons were considering whether a vaginal operation or a laparotomy offered the best hope of success, the patient solved the question for them by leaving the hospital. After the lapse of four years she was brought back, apparently dying from profuse hemorrhage. During defecation, a large rounded mass was extruded about eight inches from the vulva; this proved to be a myoma of the fundus of the now inverted uterus. An elastic ligature was at once applied to the base of the myoma, care being taken not to wound the peritoneum inside the inverted organ. The hemorrhage being thus arrested, the tumor was removed, and, antiseptic measures being taken, the uterus was replaced. The patient was ultimately discharged, cured.—*British Medical Journal*, August 21, 1886.

Bone Drainage in the Treatment of the Early Stages of Hip Disease.—At a recent meeting of the Surgical Section of the Academy of Medicine in Ireland, Mr. Stokes read a paper on this subject (*Dublin Journal of Medical Science*, August, 1886). The author commenced by alluding to the fact that hip-excision is not maintaining the position in surgical estimation that other joint-resections occupy, which he believed to be due to a twofold cause—first, the rarity of the cases in which the disease is sufficiently limited to enable the disease to be completely removed; and second, the difficulty of maintaining fixation of the limb after the operation. He pointed out how very disheartening the statistics of the operation are, as shown by Dr. Yale and many German operators of eminence. He also showed that the results of the cases treated by methodical expectation, especially where suppuration in the joint occurs, are hardly more encouraging, and quoted Hueter's opinion that suppuration in the hip-joint is a "nearly absolutely fatal process." The principles of treatment that, as a rule, are mainly relied on were then discussed, and shown to be too frequently unsatisfactory. The author then discussed the views of Sir B. Brodie and others as to the pathology of the early changes in scrofulous hip disease, and inclined to the opinion that those held by that distinguished surgeon were correct—viz., that in the great majority of instances the primary changes consisted in an inflammation in the cancellous tissue of the bone, the result usually of a traumatism. The views of other surgeons and pathologists were then mentioned, notably those of Mr. Cooper Foster, Mr. E. Owen, and Mr. Hilton. Assuming that Sir B. Brodie's views were correct, the author drew attention to the desirability of giving an early exit to the inflammatory exudations in the cancellated tissue of the bone, and thought that could be best done by the manner recommended originally by Mr. Kirkpatrick—viz., by perforating the bone and freely applying potassa c calce along the tract of the wound of both the soft and osseous structures. In illustration of the advantages to be derived from this line of treatment, the author gave the details of three cases in which he employed it, and in which the results were very encouraging.

Treatment of Cystitis in the Female.—In a paper read before the Obstetrical Section of the Academy of Medicine in Ireland, by Dr. T. More Madden (*Dublin Journal of Medical Science*, August, 1886), the writer laid considerable stress on the efficacy (after the failure of milder measures in otherwise intractable cases) of freely dilating the urethral canal so as to cause a temporary incontinence of urine, and thus allow of the direct application of whatever local medication was deemed necessary to the endo-vesical mucous membrane. This plan of treatment Dr. Madden recommended as a substitute for Emmet's operation, or the formation of an artificial vesico-vaginal fistula in some cases; and at the same time he exhibited a new dilator, which he had designed and used for this purpose in many cases of cystitis.

The Oertel Treatment of Disorders of the Circulation.—It is not yet two years since Oertel published in Munich his new views on the treatment of disorders of the circulation, yet they have already met with a great amount of acceptance in Germany, and especially among medical men practising at the various baths, who, with very good reason, believe that such places offer greater facilities for carrying out this mode of treatment than can be enjoyed by patients living at their own homes.

Oertel's general idea is that, in many cases, owing to an accumulation of blood in the venous side of the circulation, the heart has more work to do than it can perform; and therefore his first object is to diminish the amount of work it has to perform by the reduction and regulation of the amount of fluid in the system. His second object is to repair alterations which have taken place in the respiratory and circulatory organs, and the further disturbances in the other organs connected with them, as far as is possible. It is a much simpler matter to effect the first than the second object. The only way of carrying out adequately such an abstraction of fluid consists in the energetic increase of the watery excretions, and in a correspondingly great diminution in the amount of fluid taken into the body, so that the loss of fluids through the skin and kidneys may no longer be covered by what is absorbed from the stomach and intestines, and that the superfluous amount of fluid in the body—partly in the blood-vessels, and partly in the tissues—may be brought down to a normal quantity. In short, the principle is—withdrawal of fluid, and introduction of only small quantities of it. Fluid may be withdrawn through the kidneys, or through the intestines; but it can be much more safely removed through the lungs and through the skin. Oertel's grand method of carrying out the latter intention is by

exercise in the open air, by ascending heights, and by active muscular exertion producing free perspiration. This is the marked recommendation of Oertel; and wherever there are hills at any health-resort patients are now advised to follow it; and rival stations compete for superiority in the advantages which they offer in this respect. Rapid excretion of fluid, however, can be produced more quickly than by exercise, by the use of hot-air and of vapor-baths, more especially of the former; and hence such baths, which are now to be found at most health-resorts, are recommended as a substitute, or, at all events, a supplement, to the hill-climbing cure. Of course, in such treatment special attention has to be directed to the condition of the heart; yet it is remarkable to what extent hot-air and vapor-baths have of late days been considered permissible in heart-affections; but it is agreed that they are entirely inapplicable in mitral stenosis, and especially in disease of the tricuspid valves or of those of the pulmonary artery, and also in affections depending on atheromatous disease of the aortic valves. The second means of diminishing the current of blood in the system is by cutting off supplies of fluid, by using a diet which shall improve the quality of the circulating fluid. The following are some of Oertel's directions about diet: There must be no long table d'hôte dinners; small quantities of nourishing food must be eaten more frequently. During the meal no fluid is to be taken. One hour, or an hour and a half, after meals small quantities of light, red, or white wine may be allowed; wine or water, if possible, to be iced in case of the patient complaining of thirst. Strong wine, tea, coffee, and beer are disallowed, unless specially ordered by a medical man. As to solid food, Dr. Oertel is liberal, and allows great variety. One must specially avoid fat, soups, potatoes, pastry, puddings, unless they are very light. He hopes by his regulation of the supply of fat, albumen, and hydrocarbons, to favor perfect digestion and perfect oxidation, and thus improve the blood. (It may be remarked, in passing, that Oertel's dieting is considered to be as effective in polysarcia as the Banting cure.) As to the second object, or the reparation of harm already done to the organs of circulation, something is supposed to be gained by the great improvement that has taken place in the blood, especially in its being less watery; but the greatest change is expected from muscular exertion. We have not space to follow Oertel into the detailed directions he gives as to walking and ascending hills, how the patient must not be tempted by the violent action of his heart to sit down and rest; how, on the contrary, he is to avoid sitting down, and remain standing, supported by his stick or by some fixed point, till the heart has become quiet. Further, the patient, when he has got through his prescribed distance, is not to sit down, but to remain standing until he turns to walk back. By such and by other strenuous exertions the muscles of inspiration are strengthened by deep inspirations; the alveoli of the lungs, before pressed together, are expanded again, and allow air to enter into them, and the functions of oxygenation to be performed. At the same time, exercise strengthens the muscular fibres of the heart, relieves it of a portion of its fat, and increases its power of working, which is aided by the improved character of the blood to be propelled. The various baths are vieing with each other in proclaiming the advantages they offer for hill-climbing; and at Baden and other stations an elaborate system has been introduced of marking the length and the degree of ascent of every path through the woods. Those who employ compressed-air chambers say that they produce analogous effects, and may be used with most advantage in the case of patients who are not able at first to take the strenuous exercise recommended. The use of compressed-air chambers produces a permanent expansion of the pulmonary space, relieves difficult breathing, and increases the depth of inspirations. During their use more oxygen is conveyed to the blood, the beats of the heart become slower, and the heart is strengthened. In these days the employment of muscles and kneading, or massage, going under the name of curative gymnastics, are in great favor; and a claim has been put in for them as subsidiary aids in expanding the thorax and strengthening the muscles of the heart and chest. Such is a general outline of the doctrines on the improvement of the circulation that are at present current in Germany. Of course, these views have not met with universal acceptance, but the general opinion on the subject is thus represented. A patient with an affection of the heart, who was formerly forbidden every exertion, who was to guard against any, even the slightest, excitement of the heart's pulsation, is now told to ascend hills, to excite his pulse—a proceeding which was formerly considered to be certain death, but which is now believed to strengthen the muscles of the heart. The patients suffering from accumulation of fat and from fatty heart, who were formerly ordered drinking cures exclusively, are now told, "Get rid of your water; be thirsty." These are rapid springs in practice, which everyone cannot take at once. But Oertel's principles will eventually be accepted by all. They carry with them such a stamp of truth and simplicity that it is impossible that they should not be correct. That the improvement to be gained by the use of this system should be permanent, it is necessary that the reduced and more solid diet shall continue to be adhered to, and the climbing of hills be continued. It need scarcely be added, considering the organs that are the subject of it, that this mode of cure is not to be lightly undertaken without the cognizance of a physician. With reference to the absolute novelty of the hill-climbing recommended by Oertel, it may be remembered that a somewhat similar exercise was prescribed some years ago to patients with pulmonary affections, but not when cardiac complications were known to be present. It remains to be seen how far the new system of treatment will stand the test of time and of experience.—*The London Medical Record*, July 15, 1886.

Ichthyol in Rheumatism.—Dr. Dubelir reports eight cases of rheumatism treated by ichthyol at the Moscow Military Hospital. Six of the cases were acute, and two chronic. The preparation was used both internally and externally. The affected parts were first washed off with soap and water, dried, and then smeared with the ichthyo-sulphate of ammonium, and covered with cotton or flannel. After long use, or when the skin was insufficiently or not regularly washed, pustules were caused by the application. Internally the author gave fifteen to twenty-five drops of the ichthyo-sulphate of ammonium in a wineglass of water, or else administered the remedy in the form of pills of one and a half grain each, from six to twelve pills a day. In every case the pains were quieted, but the swelling of the parts did not disappear. The writer advises, therefore, that ichthyol be given in rheumatism only for its anodyne effects.—*Rueskaya Meditsina*, August 10, 1886.

Gelosine as a Vehicle for External Medication.—Gelosine is a mucilaginous principle extracted from the *gelidinum corneum*, a native of Japan. It is a colorless, amorphous, non-nitrogenous substance, which forms the basis of vegetable jellies. It is soluble in warm water, rendering solid on cooling five hundred and fifty times its own volume, the result being a fine transparent jelly, which is very slow to undergo putrefactive changes. M. Guérin considers that gelosine is admirably adapted for purposes such as poultices, vaginal and urethral suppositories, etc. The jelly undergoes gradual contraction, in which process any medicinal substance contained is slowly expressed until complete dessication is effected, thus bringing it constantly into contact with the skin. The only preparation needed is to dissolve gelosine in suitable quantity in warm water, and then add the medicinal agent, either in solution or in a state of fine division.—*London Medical Record*, August 16, 1886.

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HEREDITARY DISEASE AND RACE CULTURE.

DR. GEORGE J. PRESTON contributes an interesting article with the above heading to the *Popular Science Monthly* for September. "Men have seemed," says the author, "to regard mental superiority as incompatible with physical perfection. They have rationally regarded the highest type of man as formulated in the old proverb, 'Mens sana in corpore sano,' but in their actual living have regarded it as an absurdity." The article strongly brings out the comparative estimate placed upon physical qualities by the ancients and by those of modern times. The old Spartans left all their weak and sickly offspring to die on the mountain-sides. In Athens, where the "state" idea was so strongly grounded, each man aimed at personal physical perfection, so that his services might be all the more valuable to the state. In those days the force of hereditary disease was scarcely felt. The first appearance of any taint caused its possessor to fall behind in the struggle. It was truly a survival of only the fittest.

Now the present state of affairs is entirely different. A higher development of ethics has come about. Philanthropy and the science of medicine have caused this change. We acknowledge the great-heartedness of the one and the skill of the other. A more perfect knowledge of disease has all but banished the dreadful plagues from off the earth. The average of human life is longer than ever before. But at the same time this same ministration has preserved and intensified hereditary influences. Men live now more comfortably than did their ancestors. At the same time they are more cursed with the effects of hereditary disease. In spite of longer lives they are physically weaker. We erect hospitals to save the weak and deformed. "To anyone who has had access to any large city hospitals it is a pitiful sight to see the multitude of children who are tided over a few years and are then sent out into the world branded with a hereditary taint to propagate their wretched breeds."

This is certainly a dark picture, but who can say that its colors are gloomier than the facts warrant? The existing prevalence of phthisis and insanity are directly confirmatory of its truth. "The very precautions against death are themselves in some measure new causes of death. Let the average vitality be diminished by more effectually guarding the weak against adverse conditions, and there inevitably come fresh diseases." We see a child flat-breasted, with a graceful, slender neck, suspiciously fair complexion, and a thin, white skin with the veins prominent therein. We at once suspect a tuberculous taint. A course of cod-liver oil with other tonics may tide the child over its present dangers. Yet if the child grows up and marries, we know that the chances are almost ten to one that the offspring will manifest a similar taint. So much, then, is race culture affected by hereditary disease.

Dr. Preston does not condemn the philanthropic spirit of the times. Still less does he belittle the results which medical skill can accomplish. He makes a plea for greater care and foresight on the part of those about to marry in their choice of life-partners. He enjoins upon parents the duty of making this subject in all its bearings plain to their children. He admits the natural repugnance which obtains when "breeding" ideas are connected with human marriage, but he shows how this repugnance has led to a false modesty, and this to steady race degeneration. "We know of no government," he says, "sufficiently strong to forbid the banns of a man whose lungs are full of tubercle, or a woman upon whose person cancer has shown itself." We should not, however, go back to the old Spartan rigor. People will marry and be given in marriage as in the days of Noah so till the end of time. But we can best lighten the burden by educating the people up to the proper views on this question. Care through generations may eliminate evil tendencies just as carelessness may augment them.

THE UTILIZATION OF CLINICAL MATERIAL.

A PROBLEM of the present day is how to make the most judicious use of clinical material. Overcrowded benches at dispensaries attest its abundance. Its scarcity at some of our teaching institutions proves its unequal distribution. This scarcity has led in some quarters to most pernicious practices to further personal ends. Given, then, this abundance of material in the aggregate, how can the best use be made of it?

Physicians may be divided, broadly speaking, into two classes—those who practise among the well-to-do people, and those who work among the persons of small or, at best, very moderate incomes. The latter people, as a rule, are allured by the dispensaries away from private practice. They do not consider themselves as belonging to the poorer classes, and would indignantly repel any suggestion of being "shown to students." Below these two classes of patients is still a third class of persons, who make up the great bulk of clinical material. They fairly swarm here in New York. To their credit be it said, that they are rarely reluctant to be utilized for purposes of instruction. Yet if they receive their medical advice and often medicine free, there is no reason why they should not in this way return some equivalent for it. We would most strongly condemn the practice of offering any pecuniary inducement to this class to pose as clinical material. It almost puts a premium on disease. Yet we know that at some of our teaching institutions strong inducements to attend, outside of legitimate professional advice, are made to poor patients. If this practice continues much longer, physicians living in the neighborhood of these institutions will have to organize to defend themselves.

Such an organization is neither visionary or impracticable. Any person had rather be treated in private than publicly, and if physicians, in order to protect themselves, agree to treat poor patients free at their offices, the dispensaries would soon show a falling off in attendance.

It is a great task to reform the existing order of things. We had hoped great things from the "Charity Reform" committee appointed at the Academy meeting held some months ago. We must confess our disappointment, for, as far as we know, nothing decisive has come about from the action then and there taken. It does not seem an impossible task to so associate the teaching institutions and non-teaching dispensaries in such a way that the patients treated in the latter should be sent to the former to be utilized for teaching purposes. Many of them doubtless would not go. Enough of them probably would go to supply the demand; for the most successful teaching clinics rarely utilize more than half a dozen cases at a time, but into the merits of these few they go most thoroughly. Treatment might be refused at the dispensary a second time, unless the patient should bring from the teaching institution a card certifying to his or her actual attendance at the latter place.

The result of such a plan would be an increase in the amount accomplished with our present facilities, both in treating the sick and in utilizing them as clinical material. The annual reports of the dispensaries might not be able to indulge in such fervid rhetoric as to the amount of good done. The managerial bosom might not swell quite so high with self-complacency. So long, however, as institutions ask for contributions from the public, so long the latter has a right to demand that the policy of the managers shall be "the greatest good of the greatest number."

THE EFFECT OF COLD APPLICATIONS TO THE HEART IN FEVER.

Dr. F. T. Grigorovich (*Vratch—The Practitioner*) has studied the effect of applications of cold to the præcordia in fever. It is known that in irritable conditions of the heart cold applied here has a sedative effect. Grigorovich, however, hoped to lessen directly the temperature of the heart, and in this way prevent the pyrexial changes. He thinks that he succeeded, but it seems very doubtful when we remember that the heart is being constantly charged with hot blood from the viscera and muscles.

The method employed was to apply ice-bags to the præcordia, keeping them on for several hours daily, so as to exclude reflex effects. The cases in which it was tried were of typhoid fever. Dr. Grigorovich thinks that if applied early the ice-treatment has a beneficial effect on cardiac action.

His conclusions are as follows:

"(1) The cold undoubtedly reaches the heart itself, and thus produces an effect on its action.

"(2) This effect is particularly noticeable when the cardiac beats are increased in frequency in consequence of a high temperature quickly attained, and where a certain degree of sensitiveness to a high temperature exists.

"(3) The effect of cold is not marked at the end of a prolonged attack of fever, pathological changes having by that time probably become established in the cardiac muscle.

"(4) The local application of cold is only capable of protecting the heart-muscle from the effects of a high temperature when it is applied assiduously from the commencement of the disease.

"(5) Under its influence the action of the heart improves, the number of beats diminishes, while their force and amplitude increase.

"(6) Cold applied to the region of the heart diminishes the gravity of the *typhoid* condition, and favorably influences the respiration.

"(7) With regard to the effect of cold applied to the region of the heart on the course of the general temperature, I cannot at present express a decided opinion, as I did not investigate the question; but, in the results which I obtained, indications may be found of the possibility of its causing some diminution of the temperature.

"The observations were carried out in 1884 in the Rostoff local military hospital."

MULTIPLE NEURITIS.

Dr. Buzzard [1] made a happy selection when he chose the subject of neuritis for the series of Harveian Lectures delivered by him last winter, for in the past five years neurologists have made some very notable advances in the study of this subject. The most important outcome is the establishment of the fact that cases of extensive paralysis, of very varying types, may be caused by an inflammation and degeneration of the peripheral nerves alone, the nerve-centres not being involved. These forms of paralysis from multiple neuritis have not been systematically described in current text-books, although clinical histories of this kind have been reported at different times since the days of Dr. Lettsom, one hundred years ago; and Dr. Buzzard quotes an excellent description by Dr. Graves of an epidemic of multiple neuritis occurring in Paris in 1882.

Multiple neuritis, as it ordinarily occurs, is a disease due to some toxic agent or miasm entering the system. It occurs as an epidemic disease in Japan and South America under the name of beri-beri, or kakké. In India it has been described under the name, "iguipeditis," and in France, "acrodynia." Besides being caused by an infection, it may follow severe exposures, these producing what is termed the "rheumatic" form; while much more often, in this country and in Europe, it is due to alcoholic excesses, diphtheria, lead, arsenic, and possibly other metallic poisons. The symptoms in typical cases are those which would naturally follow from an irritation and partial or complete loss of function of the nerves of the extremities. The patients suffer first from sensory disturbances, prickings, numbness of the hands and feet; then burning sensations, smarting pain, tenderness of the soles of the feet, or perhaps of the whole extremities. With the sensory symptoms there gradually appears motor weakness, and, in bad cases, complete paralysis, the lower extremities suffering the more. In some cases even the nerves of the face and eyes are in-

[1] Paralysis from Peripheral Neuritis: of Gouty, Alcoholic, Diphtheritic, and other Origins. The Harveian Lectures for 1885. By Thomas Buzzard, M.D. London: J. & A. Churchill, 1886.

volved, and the patient lies in bed a helpless wreck. There are very rarely indeed any "girdle-symptoms," such as occur in myelitis, and no bladder or rectal troubles.

The muscles gradually atrophy, and show partial or complete degenerative reactions. They are often tender to the touch, and especially over the motor points and along the course of the nerves.

Sometimes, and particularly in the alcoholic and diphtheritic cases, the symptoms resemble those of locomotor ataxia. The tendon-reflex is gone, there is very marked ataxia, without any great loss of muscular power. These cases are known as alcoholic, or diphtheritic, etc.—pseudo-tabes. They may deceive the physician if he is not careful, and lead to a wrong prognosis as well as diagnosis.

The prognosis in multiple neuritis is usually good. The patient recovers, though it often takes a very long time. Only in cases where the muscular atrophy is very great is full restoration to health impossible.

Pathologists divide neuritis into two types—the interstitial and the parenchymatous or degenerative. The two forms generally are more or less mingled.

The interstitial form predominates in the more localized cases due to rheumatic influences, phthisis, infective fevers, and injuries.

It is the parenchymatous form which is found in the multiple neuritis that we have been describing. It has been observed that parenchymatous neuritis often attacks only certain segments of a nerve, and it has then been called segmental neuritis.

Multiple neuritis runs a course lasting several weeks before recovery sets in, and the length of time of convalescence depends upon the severity of the case, and especially the extent of the muscular atrophies.

In the treatment not much can be done at first except to relieve the symptoms. Later, electrical, mechanical, and tonic treatment is indicated.

THE COREAN GOVERNMENT HOSPITAL.

In former times it was usually the missionary who first gained admittance to the hermit nations of the East, and whose labors did much to dispose the inhabitants of those countries to look with less disfavor upon the outside barbarians from Europe and America. Now the physician is perhaps the most powerful agent in reconciling these peoples to the introduction of Western ideas. When they find that we can give them health they soon learn to believe that we have other gifts of nearly equal value to bestow upon them, and they are ready to submit to civilizing influences and to receive the agents of progress in exchange for these advantages.

One of the surest indications that Corea, which was until very recently a forbidden land, will soon remove all remaining barriers to intercourse with Western nations is to be found in the fact that there has been in existence, for nearly eighteen months, a Corean government hospital in Seoul, under the direction of two American physicians, Drs. H. N. Allen and J. W. Heron. The establishment of the institution resulted from a fortunate accident. Dr. Allen happened to arrive in Corea just before the *émeute* in 1884, and was called upon to treat the wounds of Prince Min Yong Ik, who had recently returned from this country, and was favorably disposed toward Americans. An account of this case and of its favorable termination was published in THE MEDICAL RECORD of June 13, 1885. The results obtained in this case, and in those of a score of wounded Chinese soldiers, were so favorable, and demonstrated so clearly the superiority of Western medical science, that Dr. Allen soon had more Corean patients on his hands than he could attend to. An application was then made to the government for a hospital, and the suggestion was immediately acted upon. A good site was selected, the buildings upon it made suitable, several hundred dollars appropriated for medicines and appliances, and a full staff of Corean officers appointed to represent the government in the institution. The hospital was opened on April 10, 1885, and the number of patients applying for relief increased so rapidly that it was soon found too great a tax for one man, and accordingly Dr. Heron was sent for.

During the first year 265 patients were treated in the hospital, and 136 operations were performed; only 6 deaths occurred. In the dispensary 10,460 patients were treated, and 394 operations were performed. A medical school has also been opened in connection with the hospital, and the government has nominated 16 students, of whom 12 will be admitted and will receive as thorough and practical a course of instruction as is possible under the circumstances.

It is impossible to estimate the amount of good which this undertaking is destined to accomplish, and Drs. Allen and Heron certainly deserve great credit for having done so much and so well in so short a time. And we hope that the success of their undertaking in the future will be commensurate with the promises made by its beginning.

News of the Week.

THE AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will hold its next Annual Session at Pittsburg, Pa., October 12th and 13th.

THE AMERICAN RHINOLOGICAL ASSOCIATION will hold its fourth Annual Meeting in St. Louis, Mo., October 5th, 6th, and 7th.

ERRATA.—Our attention has been called to the following in THE MEDICAL RECORD for September 4th: P. 268, under "A Chair of Evolution," *philogenetic* should be *phylogenetic*, from the Greek φῦλή (a community related by descent), not φίλος (a friend), nor φύλλον (a leaf). P. 264, under "A New Brain Fissure," *gyre*, the English form of *gyrus*, is used in the article referred to as a brief synonym for *convolution*, and never instead of *fissure*. In the ninth line from the bottom, *caudal* should be *caudally* or *caudad*.

THE PARKES MEMORIAL PRIZE.—This prize, which consists of £100 in money and a gold medal of the value of fifteen guineas, is awarded every third year to the writer of the best essay on a subject connected with hygiene, the competition for which is open to medical officers of the British army and navy. The prize was awarded this year to Dr. Andrew Duncan, of the Indian Medical Service, the subject of the essay being "The Prevention of Disease among Troops during Military Operations in

Tropical and Subtropical Climates." The subject of the next prize is "The Etiology and Prevention of Yellow Fever," to be illustrated as far as possible from the personal experience of the writer.

A TRAINING-SCHOOL FOR NURSES FOR THE INSANE has been established by the managers of the Hudson River State Hospital in connection with the institution under their charge. It is intended for the instruction of those who wish to make a specialty of nursing the insane, either in private houses or public institutions. Graduates of general hospital training-schools will be admitted to the school for the period of one year, at the end of which time, after passing a satisfactory examination, they will receive diplomas bearing the seal of the hospital, and the signatures of the President of the Board of Managers, the Medical Staff, and the Principal of the Training-school. They will be paid at the rate of $20 per month during the first six months, and $25 per month for the second six months. For those who remain in the service of the hospital after the completion of this term special rates of remuneration will be arranged. Women, between the ages of twenty and thirty years, who are not graduates of general hospital training-schools, will be admitted to the school and receive a course of instruction covering a period of two years. After a satisfactory examination at the conclusion of this course, they will be granted certificates of graduation bearing similar signatures to the diplomas. They will receive from $10 to $17 per month, rated according to proficiency and time and value of service. Special rates will be made for hospital service after graduation. In connection with the hospital there is also a training-school for men who are between twenty and thirty years of age. The course of instruction covers two years, at the end of which certificates of graduation are bestowed upon evidence of competency. The men are paid at rates ranging from $16 to $22 per month, according to proficiency and time and value of service. Special rates are arranged with those who remain at the hospital after graduation. All the pupils and nurses are allowed board, lodging, washing, and medical care, if required, free of charge. Applicants for admission to the training-school must pass the preliminary examination required by the New York Civil Service Commission. This examination is conducted at the hospital by the officers of the institution, who constitute the Provisional Examining Board. Applicants must be of healthy constitution, and temperate and moral in habits, and must present letters, certifying to character and qualifications, from two or more responsible sources. The diplomas of trained nurses are received in lieu of letters. For the instruction and training of women, the managers have secured the services of Miss S. I. Hawley, a graduate of the Bellevue Hospital Training-school, with subsequent experience in a hospital for the insane. In her capacity of Matron of the Hospital and Principal of the Training-school, she gives daily instruction at the bedside and at class recitations. Applications for positions in the training-school may be made to Dr. Joseph M. Cleaveland, Superintendent, Hudson River State Hospital, Poughkeepsie, N. Y.

THE PENNY PASSED.—Dr. J. L. Gardner writes that his patient, who was reported to have swallowed a copper cent, successfully passed the latter after a lodgement of five weeks.

THE EDITOR OF "THE LANCET'S" CONFESSION OF FAITH.—Some time before his death the late Dr. James G. Wakley made a special request that the following confession of faith should be introduced into any notice of his life which might appear in the pages of *The Lancet*: "Feeling my deep responsibility to God for the position in which, in His providence, He has placed me, I desire to testify to the comfort derived during my sickness from a lively faith in our Lord Jesus Christ, and that I die in the sure hope of a glorious resurrection."

THE CHOLERA.—It is now stated that the cases which have been reported as cholera in Northern Italy are not such at all, but are cases of typhoid fever. Cholera has existed and still prevails, however, in Southeastern Italy (Bari, Brindisi, Lecce, etc.). Cholera is reported to have appeared at Aksu, in Central Asia. In Japan and China it is reported that the disease has been making frightful ravages. In the former country, according to the *Japan Gazette*, there have already been 59,000 cases, with 37,000 deaths, this year.

FREE DISPENSARIES are almost unknown in France, there being but three in Paris, according to the correspondent of the *Provincial Medical Journal*.

THE LATE DR. JOHN BURKE.—At the last regular monthly meeting of the New York Medical Union, held September 14, 1886, Drs. P. J. Lynch, D. McSweeny, and Alexander D. Hunter being appointed a committee to take suitable action in regard to the death of the late Dr. John Burke, reported the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased Almighty God to remove from this life, in the prime of his usefulness and maturity of his experience, our esteemed friend and associate, Dr. John Burke, a founder and former President of this Society; therefore be it

Resolved, That, while we bow in humble resignation to the divine will, we lament in the death of Dr. Burke the loss of a faithful friend and skilful physician, who contributed much from the fruits of his great experience and sound judgment to the interest of our discussions and to the usefulness of our Society.

Resolved, That we recognize in his successful professional career the encouraging example of what industry and intelligence, with spotless integrity of character, may accomplish, without extraneous aid, when directed by the noble and self-sacrificing spirit of our profession, for the attainment of honorable ends.

Resolved, That we hold in grateful and affectionate remembrance the many kindly and estimable qualities of mind and heart which endeared him to all with whom he came in contact, and caused him to be justly regarded as one of the most popular and conscientious practitioners in our city.

Resolved, That we extend to his bereaved family the assurance of our deep sympathy and condolence in their great affliction; and pray that the God of mercy may pour into their wounded hearts the balm of His divine consolation.

Resolved, That the foregoing be sent to THE MEDICAL RECORD for publication, and that a copy be transmitted to the family of the deceased.

AN EPIDEMIC OF DENGUE has appeared in Australia.

MORPHINE INSTEAD OF QUININE.—Another case in which a druggist put up morphine instead of quinine is reported from Columbus, O. The patient died.

DR. WILLIAM W. JACKSON, for the past ten years physician to the City Prison, and medical examiner of the Department of Charities and Correction, died on September 14th at his residence in Harlem. Dr. Jackson was fifty-six years of age.

A DISPENSARY THAT IS NOT NEEDED.—"The managers of the Presbyterian Hospital," writes the New York correspondent of the *Weekly Medical Review*, "have finally decided to erect a new building for the purposes of a dispensary, and have appropriated $100,000 for that purpose. The project has met with dissatisfaction on the part of all except the managers themselves. The institution is situated in a part of the city occupied by some of our wealthiest residents. Only four or five blocks off is the dispensary of the Mt. Sinai Hospital, one of the best equipped and most efficient institutions of its class in the city. It is true that the Presbyterian Hospital has a large tenement-house district lying east, but there is no complaint that the poor of that region are not already amply cared for in the way of medical charity. The whole project of a new dispensary seems a most decided 'black eye' to the cause of charity reform, which grows very, very slowly in this great city."

ST. LUKE'S HOSPITAL.—It is reported that the managers of this hospital have decided to expend from $70,000 to $100,000 in the erection of an additional building on the present site. This means that the hospital will not be removed, at least for a very long time to come. Some criticism is excited by the fact that the hospital, while owning immensely valuable grounds, which if sold would make the institution almost independently rich, yet continues to occupy them and to ask people to contribute to its expenses. The site is, however, a very convenient and luxurious one.

THE CHARLESTON MEDICAL RELIEF FUND.

THE hearty response to our appeal on behalf of the suffering medical gentlemen of Charleston shows how keenly alive their brethren are to the necessities of the situation. We have received many touching letters of sympathy, which have accompanied the substantial offerings of money, but we must be content to mention merely the names of the donors. We are pleased to hear that there are not so many medical gentlemen in need as we were at first led to believe. The following letters, received since our last issue, will explain the situation more explicitly:

CHARLESTON, September 13, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR DOCTOR: After unavoidable delay in reply to your touching letter, which has been read to my colleagues with appreciative thanks from all, let me state: That the profession *en masse*, while anxious for immediate aid—some to rebuild the homes, others for their daily necessities, since no bills are collected—are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted. Your proposition to forward whatever contributions reach you to me, and through me to a committee, say of three, consisting of Drs. Porcher, Prioleau, and myself, for distribution, is the readiest and easiest way of reaching all who stand in need.

I must say to you that our urgent need at present is the repairing of our old Medical College of the State of South Carolina. It will take $6,000 to do this. The college is an individual enterprise; it is not a city or State organization, and it has no endowment. The faculty has always supported it, through all its trials, and we have never before asked for aid! We want this aid now, and I for one am not ashamed to beg.

There are those who will not directly beg, though I know that they will gladly receive what may be proffered.

What we now most urgently require, or look for, is the means to rebuild our poor old college, and in this direction you must move with others to help us.

With kindest regards and thanks to you, to Dr. Buck, and others who may assist us in this direful distress, accept in advance the gratitude of the entire profession.

Truly and gratefully yours,

MIDDLETON MICHEL, M.D.

69 GEORGE STREET, CHARLESTON, S. C., September 14, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of September 11, 1886, there appears an article headed "Charleston Physicians in Great Need." Please contradict this. The profession in Charleston has just held a meeting, in which it was found that while some few may solicit and accept aid as private individuals, the medical profession of the city as represented by its leading members would under no circumstances accept money assistance, nor do they desire to be placarded as mendicants.

Thanking your journal for the kind sentiments expressed, and assuring you that we appreciate its generous and brotherly feeling, I am, as ever, one of your warmest admirers and subscribers.

THOMAS LEGARÉ, M.D.

We are glad to learn that so few require assistance, and we trust that the offers of their brethren throughout the United States will be taken in the proper spirit.

Thus far we have collected and forwarded to Dr. Michel five hundred and sixty-one dollars. This sum is specially designed to relieve the pressing needs of medical men and their families. We, however, heartily sympathize with the College faculty, and will gladly forward any sums sent through us for the aid of the institution.

The following is the list of additional contributions to the Medical Relief Fund:

J. H. Mennen, M.D., New York	$2 00
Fairchild Bros. & Foster, New York	50 00
Charles Milne, M.D., New York	5 00
Wm. P. Beach, M.D., Eatontown, N. J.	2 00
E. P. Swasey, M.D., New Britain, Conn.	5 00
Thomas E. Satterthwaite, M.D., New York	20 00
J. E. Sheppard, M.D., Atlantic City, N. J.	5 00
L. A. Walker, M.D., New York	2 00
H. Knapp, M.D., New York	25 00
Geo. E. Percy, M.D., Salem, Mass.	15 00
Edward P. Rose, M.D., Crested Butte, Col.	20 00
L. H. Miller, M.D., Brewster's, N. Y.	3 00
V. P. Gibney, M.D., New York	20 00
S. Pollak, M.D., St. Louis, Mo	5 00
H A. C. Anderson, M.D., New York	10 00
J. C. McKee, Surgeon, U.S.A.	25 00
Charles W. Packard, M.D.	10 00
N. B. Scott & Son, Hagerstown, Md.	5 00

IN acknowledging the contribution of Dr. Conrad Wienges, last week, the name was accidentally misspelled.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Md., September 21, 22, and 23, 1886.

TUESDAY, SEPTEMBER 21ST—FIRST DAY—MORNING SESSION.

THE Society convened in the hall of the Johns Hopkins University, and was called to order at ten o'clock by the President, DR. THAD. A. REAMY, of Cincinnati, O.

THE ADDRESS OF WELCOME

was delivered by DR. H. P. C. WILSON, of Baltimore, who referred to the honorable distinction which the Society had won, and, in the name of the citizens of Baltimore, in the name of her women, in the name of the general profession, and in that of the resident Fellows, welcomed its members within her borders whenever they might feel inclined to come.

Dr. H. P. C. Wilson, of Baltimore, then read a paper entitled

THE DIVISION OF THE CERVIX BACKWARD IN SOME FORMS OF ANTEFLEXION OF THE UTERUS WITH DYSMENORRHŒA AND STERILITY,

in which he advocated the adoption of this procedure in the following classes of cases:

First, those of anteflexion of the uterus with elongated and indurated cervix, when the body is bent upon the neck, or the neck upon the body, or when they are bent upon each other, thus forming a more or less acute angle at the internal os.

Second, in such acute anteflexion as when the cervix is hypertrophied, blue as a mulberry, and its tissue dense, almost like cartilage.

Third, those cases in which at the internal os the encircling band gives to the finger the feel of a strong cord between the neck and the body.

In the cases of anteflexion when the knife should be used all the above lesions are coincident, with more or less diseased Nabothian and utricular glands and diseased mucous membrane, all of which must be cured by proper after-treatment. He regards the cut as no more dangerous, when made with proper precaution, than when made elsewhere in the body, and believes it to be the most efficient method of rectifying anteflexion of the uterus. The patient should be allowed to thoroughly recover from the operation before any intra-uterine medication is begun, and then the best consists in the local use of Churchill's tincture of iodine. The patient should keep quiet in bed for two weeks, with almost no treatment, after which manipulation exceedingly gentle, with sound dilatation, etc., may be resorted to for the purpose of keeping the canal open sufficiently.

The paper was discussed by DR. T. A. EMMET, of New York, who thought that he would have been willing, fifteen or twenty years ago, to have endorsed everything which Dr. Wilson had said, for he had no doubt that he had done as much harm as anyone by the operation, a fact which had caused him to change his opinion concerning it. The operative procedure is not free from danger. He had known at least twenty deaths to occur from it. But, as Dr. Wilson had said, if all pelvic inflammation is first removed, very likely but little harm will be done by the cut; but also no good will be done by it.

DR. J. R. CHADWICK, of Boston, had been disappointed with regard to the results of the operation when performed for either dysmenorrhœa or sterility.

DR. W. H. BAKER, of Boston, thought that Dr. Wilson should be congratulated on account of his success in the performance of this operation, and it seemed to him that the paper showed very conclusively the difference in experience which gynecologists might have in its performance. Since he performed it first he had been led to perform it less and less, and had limited it to cases in which there is lack of development.

The paper was further discussed by DR. FORDYCE BARKER, of New York, who was the first to bring one of Simpson's uterotomes to New York, and which Sims used in his early operations; by DR. JOHN SCOTT, of San Francisco, and DR. HOWARD, of Baltimore, who had resorted to all methods of incision, and had used all instruments devised for the purpose, and was not wedded to either method or instrument exclusively. With regard to the frequency with which the operation had been performed, Dr. Wilson probably had done it ten or fifteen times to his once. In cases where the vaginal portion of the cervix is very long, producing a small anterior and a large posterior cul-de-sac, he performs the operation of making the posterior incision when all other measures fail to give relief. Performed as it should be, there was not more danger than with other operations of similar magnitude, and a certain proportion of patients can be cured by it.

The discussion was closed by DR. WILSON, who said that he had not heard anything in the discussion which convinced him that in properly selected cases division of the cervix was not the best thing that could be done for the patient.

DR. R. STANSBURY SUTTON, of Pittsburg, then read a paper entitled

ANOTHER MODIFICATION OF EMMET'S CERVIX OPERATION.

Last year he directed the attention of the Society to a modification of Emmet's operation, which had for its object the preservation of the cervix in cases in which the typical operation was not possible, and he now asked attention to a further method of circumventing the same difficulty. He related the history of the case in which he had performed it, with such success as to convince him that it was worthy of further trial. The angles of the laceration were completely filled with hyperplastic tissue, and the cervix was of almost cartilaginous density. With a pair of strong scissors, one blade thrust into the cervical canal, he divided the cervix back to the full depth of the inguinal laceration, and then with a double-edged knife made incisions across the central lumen of the internal os and denuded the four surfaces in such a manner that when they were brought together there were left two ridges of tissue remaining, surmounted with a thin layer of mucous membrane; these stood above the surface to the height of about seven millimetres, and the face of the crest was about three millimetres wide. The extremity of these strips at the edge of the incision turned out, the object being to preserve the contour of the future os and cervix.

DR. EMMET, of New York, was struck with the ingenuity of the procedure, a device which required practice to determine whether it could be made applicable to a large number of cases. As a rule in such cases, when there was a condition very much like that present in an old tonsil, he believed that it was better surgery to amputate a portion, and cover the stump with vaginal tissue.

DR. G. J. ENGLEMANN, of St. Louis, thought that it was very much the same position as was taken by Dr. Sutton last year, reached by a somewhat different method. He did not regard the strip of mucous membrane as of very much importance, as the introduction of a piece of fine catgut would keep the canal open all that was necessary.

The paper was further discussed by Dr. Baker, of Boston; Dr. Scott, of San Francisco; Dr. Dudley, of New York; Dr. Chadwick, of Boston; and the discussion was closed by Dr. Sutton.

A paper by DR. ELWOOD WILSON, of Philadelphia, on

THE TREATMENT OF RECENT LACERATIONS OF THE CERVIX UTERI,

was read by the Secretary, DR. JOSEPH TABER JOHNSON, of Washington. It contained brief reports of six cases of

recent laceration treated successfully by the local application of nitrate of silver, every five days, of the strength of a dram to the ounce of water. He had never found the method successful in chronic cases. In many cases nothing but Emmet's operation could restore the parts to their natural condition, and while it was one of the most valuable additions to gynecological science which had been made, still many had been carried away by its brilliancy, and it had been performed when it was unnecessary. Ten or twelve days after confinement examine, and if a laceration exists, thoroughly cleanse and dry the surface, and carefully paint it over with the solution mentioned. If the fissure be discovered immediately after labor, treat the parts antiseptically until the local use of the silver is resorted to, using iodoform bacilli introduced into the cervix, irrigations with bichloride solution every third day, and antiseptic napkins.

Dr. Barker, of New York, regarded the paper as practical in one particular especially, namely, the cases illustrated the fact that it was unnecessary to resort to operative interference at once after labor has been completed.

Dr. Emmet, of New York, believed that the only condition which required immediate interference after labor was the occurrence of hemorrhage.

The paper was further discussed by Dr. Scott, of San Francisco, and Dr. Barker, after which the Society adjourned to meet at 3 P.M.

First Day—Afternoon Session.

The first paper was read by Dr. T. A. Emmet, of New York, entitled

PELVIC INFLAMMATIONS—CELLULITIS VERSUS PERITONITIS.

The central point of the paper was that the more circumscribed the inflammation seemed to be, unless a pure cellulitis, the more serious would be the consequences if its existence be practically ignored. An apparently limited inflammation is to be feared, because it almost always started in the peritoneum, and is nearly always the remnant of a more extended one. It has been held that, as a rule, there was but little evidence of previous inflammation at operations for removal of the ovaries and tubes, and his own experience had confirmed the accuracy of the observation. The question had been raised as to the existence of pelvic cellulitis, since its products found afterward are so few. But the products of cellulitis rapidly clear up, and the walls of the passages are separated as by lateral traction, and if the inflammation stops short of pelvic abscess, nothing can be detected by the fingers except a few bands running in different directions. By degrees the surrounding connective tissue is drawn together by its own elasticity and fills the space unoccupied.

If the inflammation is below the dip of the peritoneum, there is nothing to mark the site of extensive disease except a small scar. Connective tissue never regains its integrity after having been once inflamed. If the surrounding connective tissue can supply the loss, the part will return to its former shape and the injury become unappreciable. On the other hand, if the inflammation is more extended, or the tissues break down into abscess, the injury can be repaired only by adhesive inflammation of the parts involved. When cicatricial contraction occurs after healing by granulation, the contraction is not due so much to loss of tissue as to the *absence* of contraction from surrounding connective tissue destroyed before the scar was formed.

Dr. Emmet then referred to the recent paper by Dr. H. C. Coe, of New York, and spoke of the relation of gonorrhœa to pelvic inflammations. Reference was then made to the operation for removal of the uterine appendages, which he believed had been done in New York with as good results as had been obtained abroad, and, furthermore, that if the true proportion of deaths could be ascertained the rate of mortality would be fearful. It should be done only as the last resort, and after all other means have failed to afford relief. The operation doubtless fills an important place, but its usefulness must be restricted or the good name of the profession will suffer in the future.

Dr. Robert Battey, of Rome, Ga., regretted that he was looking upon one side of the shield, while Dr. Emmet was looking upon the other. From his own standpoint he regarded most of these serious inflammations of the pelvic cellular tissue, which are so destructive in their course, as dependent upon disease of the ovary, either cystic or cirrhotic. With reference to the frequency with which removal of the ovaries and tubes was done at the present time, he was largely in sympathy with Dr. Emmet; he thought that it was performed too often. He did not believe that in every case of organic disease of the ovary extirpation was required. He had seen cases where the operation had been refused, and the result had been rather gratifying. But he had performed it also with exceedingly gratifying results. The general health of the patient must be broken down; it must appear that there is no other practical remedy; it must appear probable that extirpation will eventuate in cure—to justify the operation.

Dr. R. Stansbury Sutton, of Pittsburg, continued the discussion, and exhibited several specimens which he had removed with the result of curing the patients. He believed that the blame should not be attached to the operation, but be placed upon those who were performing it without having had the requisite amount of experience to enable them to perform it properly.

Dr. S. C. Busey, of Washington, said that if more regard was paid to the histological anatomy of the pelvic tissues there would be less disagreement in pathology. The cellular tissue is a vast lymphatic sac, as also is the peritoneum, and it seemed to him that the whole subject could be simplified by classifying these affections as pelvic lymphangitis, varying in different cases.

With reference to removal of the uterine appendages, he thought that too many operations had been performed, and perhaps there were too many operators undertaking to do it. Still he believed that diagnosis should be based upon something besides moral, ethical, or social considerations.

The discussion was continued by Dr. Engelmann, of St. Louis; Dr. Scott, of San Francisco; Dr. Mann, of Buffalo, and Dr. Wilson, of Baltimore.

Dr. John C. Reeve, of Dayton, O., then read a paper entitled

A CASE OF ABDOMINAL SECTION FOR CHRONIC SUPPURATIVE PERITONITIS.

The detailed history of the case was given, which occurred in a woman who lived as though she was married. It was a case of abdominal disease. Pus was discharged by the rectum. After declining laparotomy, offered when it was evident that she could not be cured by other treatment, she finally asked for the operation. The patient recovered from it, and was doing very well, but chronic kidney disease was present and doubtless would terminate fatally before long. A fecal fistula remained, from which there was an occasional discharge, although passages per rectum occurred almost daily.

The paper was discussed by Dr. Scott, Dr. Goodell, of Philadelphia; Dr. C. C. Lee, of New York; Dr. Sutton, Dr. J. Taber Johnson, of Washington, and the discussion was closed by Dr. Reeve.

The Society then adjourned to meet at 10 A.M. Wednesday.

A banquet was given at the Hotel Rennert, in the evening, by the Baltimore Gynecological and Obstetrical Society.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

MEETINGS OF SECTIONS.

(Continued from page 334.)

SECTION IN PUBLIC HEALTH.

WEDNESDAY, AUGUST 11TH—SECOND DAY.

DR. TAAFE, Medical Health Officer of Brighton, delivered his

OPENING ADDRESS.

In it he spoke of the decrease in the death-rate between 1871 and 1880. The death-rate in England and Wales was 21.27 in that decade, while it had been 22.4 for the thirty years between 1838–70. The borough of Brighton had shared in this improvement. The average death-rate in the two decades 1851–60, 1861–70, was 22.0; in 1871–80 it was 20.0. In the year 1885, in the Parliamentary borough of Brighton and Hove, the annual death-rate was 16.4, and adding 10,000 as the average visitors to the city, this gave a death-rate of only 15.2 per 1,000. The death-rate for 1885 was 13.1, 14.1, 12.9, 13.5 in the Palace, Kemptown, Preston, and Hove districts. Dr. Taafe then referred to the way in which the Registrar-General's weekly returns might prove misleading. In the reports the Registrar took a weekly population as a constant, by means of which he calculated the annual death-rate for any one week. This constant was obtained by dividing the gross population by 52.17747 (the correct number of days in a year being 365.24226), thus getting a weekly population; and by multiplying the number of deaths by 1,000, and dividing by the weekly population, the annual death-rate was obtained. Thus, when there were 2 deaths in Brighton, with a population of 107,000, the death-rate given in the Registrar-General's returns was put down at 1 per 1,000. Recently the Registrar-General, in addition to giving the death-rate for the week, had given that of the three previous weeks, which was a great improvement.

DR. KELLY, in moving a vote of thanks to Dr. Taafe, said that people should not believe too much in weekly returns. The President had shown them the decreased death-rate for the past ten years, but not the birth-rate, which had also decreased. The only advance made was that more people were living at an advanced age now than formerly. With regard to London, it was the last place which should be looked to for sanitary improvements.

DR. EWART seconded the motion. He attributed the decrease in the death-rate chiefly to improved sanitation, but it must be remembered that they had by no means reached perfection.

DR. EWART then read a paper on

SCARLET FEVER, ITS CAUSATION, AND THE BEST SANITARY MEASURES FOR DEALING WITH THE DISEASE IN CITIES.

Of all the acute infectious diseases among children scarlet fever was the most fatal, for it accounted for one-twentieth or twenty-fifth part of the general death-rate, so that from twenty thousand to twenty-two thousand deaths occurred from it annually in England. It occurred among all classes, but was mainly a disease of early life. Thus 63.87, 89.8, and 95.63 per cent. of the deaths from scarlet fever took place under five, ten, and fifteen years of age, while only 1.75 per cent. took place in persons over twenty-five. Its infectious character was found on the clearest evidence. The period of its importation into North America from Europe (1737), into South America (1829), into Iceland (1827), into Greenland (1847), and Australia (1849), was pretty exactly known. If tropical regions were excepted, there were few countries where it did not break out occasionally, either in the sporadic or endemic form. Though it was difficult to trace out the origin of the first case in many instances, there seldom was any doubt as to how it spread afterward. The certainty of its diffusion among the predisposed when no preventive measures were adopted, and the almost equal certainty of its extinction when these were vigorously carried out, pointed to its propagation by infection. The retention of a single case during a small portion of the infective period into a children's hospital exposed some of its inmates to attack; while its prompt removal, prior to the development of its infective property, was sure to prevent its communication to others. Immunity was also obtained by disinfecting tainted articles. The disease had been produced by the inoculation of the small vesicles liable to form in the course of the eruptive stage, and in such cases the usual exemption from recurrent seizures common to other contagious diseases was obtainable. Stoll succeeded in inoculating the scales during the peeling process, although this had generally failed. That the poison was contained in the blood was proved by the fact that infants had been born with the disease, and because rabbits were easily killed by inoculating them with the blood of patients with scarlet fever. The transmission was usually by means of air tainted with the products of the disease. The poison had been known to be transmitted by a letter, a shawl, a piano, a box of toys, by horses, swine, cats, dogs, and cows. It had been communicated directly by the cow, and from the milk of the infected animal. It might be derived from water contaminated by the poison.

It was often conveyed into schools, churches, assemblies, by persons free from the disease themselves, but who had been in presence of the sick; and often spread far and wide by children who were themselves in the latent period; and it was found to lurk in the walls of rooms where patients have slept, and which had been imperfectly purified. The period of incubation varied from two to five days, but it might last only twenty-four hours, or extend to fourteen days. In inoculated cases seven days was the period. The disease was rarely communicated in the incubative period; but from that date up to the end of the peeling process it was very contagious, although not so much so as measles, whooping-cough, or dengue. Second attacks very rarely occur; third attacks and even fourth attacks have been mentioned, but were most rare. In all cases the first essential condition of prevention of scarlatina was segregation of the affected from the healthy, and continued isolation of the sick until all risk of communication had gone by. These desiderata were generally practicable among the richer classes. The quarantine-room in private houses should be at the top of the house, and should have as little furniture as possible. A sheet should be suspended on the outer aspect of the doorway, and constantly kept moistened with chloride of lime, carbolic acid, Condy's fluid, or other disinfectant. A small basin containing terebine should receive the expectoration of the patient. A large vessel containing a strong solution of carbolic acid, say in the proportion of a quarter of a pint to a gallon of water, should be kept in readiness, into which shirts, towels, etc., should be immersed. These articles should then be boiled, and then, if possible, be subjected to the influence of dry heat. The receptacles for the excreta should be charged with disinfectants, and at once emptied into the water-closet. When the peeling process commenced, the body should be anointed twice a day from head to foot with camphorated olive-oil—for the purpose of fixing the contagium, and preventing its escape into the surrounding

air—until the patient was well enough to take a warm bath, when he should be well rubbed with terebine soap. The bath and scrubbing should be repeated for four or five days. After this the patient might return, in some four to six weeks in all, to the family apartments.

Skilled nursing was important, as unskilled nurses would be sure to neglect some precautions. The nurse should not wear outer woollen garments, as these might keep up the contagion. The physician on leaving the sick room should always wash his hands with terebine soap. Attached to every public institution there should be a separate infection hospital. When convalescence was re-established the room should be thoroughly disinfected, and the bedding submitted to a dry heat of 250° F. In the event of death occurring, the body should not be removed from the room, except for burial or to go to the mortuary. It should be put into the coffin without any delay, and a pound or two of carbolic acid along with it, and then buried or cremated. This was Dr. Budd of Bristol's admirable plan. In the crowded haunts of the poor and in many cottages in the country Dr. Budd's plan could not be carried out. It was for this reason that of late so much attention had been given to the construction of hospitals for the sick. These should be far from other human habitations, to as secure a good system of quarantine, and should consist of separated buildings for the reception of small-pox, scarlet fever—and perhaps measles and erysipelas—and typhus fever. Each pavilion should form a small hospital, and each should have its own nursing staff. Self-supporting institutions might also be formed for the treatment of the richer classes. In removing scarlet-fever patients the patients were placed in the best circumstances for recovery, while the family and the public were protected in the event of the transfer being made early enough. Under the present state of the law, removal, as a general rule, was voluntary, and only affected small portions of the community, and was very partial in its operation. This should be seen to in some future statute. Notification of diseases had been carried out in many large cities. Notification was either made by the family medical attendant, conjointly by him and the householder, or by the householder or other responsible person. The results had not been so encouraging as had been expected. To obtain the cheerful co-operation of the medical profession the duty of notifying ought to be imposed on the natural guardian of the patient, or the householder alone.

The partial or local plan of notification had been successfully opposed, with a few exceptions, by the profession at health-resorts, and on good grounds, particularly as regarded marine sanitaria. It stood to reason that unless the whole country were subjected to the scheme of compulsory notification, it could not be so successful as it otherwise would be. What was the use of having it, for example, at those health-giving places, so long as the populations from which they derived their visitors—their stock in trade—remained altogether unprotected? And until these were equally guarded the benefit to be expected in sanitaria from notification was problematical. Seeing that in all our watering-places the medical practitioners were keenly alive to the necessity of affording every assistance in their power, with a view to stamp out contagious diseases, the game would hardly be worth the candle. When the physician was first called to an infectious case he had at once to think how isolation or antisepticism should be carried out for the good of the patient and the protection of the community. If these objects could not be accomplished at home, then the practitioner should try to obtain the consent of the responsible person to have the patient transferred, under the necessary precautions, to a well-appointed hospital, where they could be carried out. Notification could do no more than this. General compulsory notification might do more if it carried with it the power to place all cases, where the needed amount of isolation could not be procured at home, in the quarantine of some public institution. It was doubtful, however, if such a law would be sanctioned by public opinion at present. It was improbable that the legislature would sanction such an extensive curtailment of private rights, involving arbitrary interference, under most distressing surroundings, with parental authority, individual liberty, and responsibility. What the upshot of such a law would be was clear from the fate of the Contagious Diseases Act, and the unpopularity and danger to which universal vaccination had been exposed by cumulative punishments. The time might come when the people, being better educated, might sanction, as they had done with respect to other enactments for the preservation of health, life, and property, a general law for the compulsory notification of contagious diseases, carrying power to place those laboring under any of them, who could not receive proper treatment in their own homes, in the quarantine of a hospital specially set apart for the purpose.

Dr. Squire said that whatever sanitation had done for people generally, he did not think it had made much difference, with regard to scarlet fever, between the rich and the poor. Whatever hardships the poor might have to complain of, their children ran about and played in the streets, and got a fair amount of fresh air, and in his experience it was not the poor only who got the worst of scarlet fever. Some of the worst results were found among the most vigorous and most careful. He was in favor of notification of contagious diseases and of isolation, and said he knew an instance in which good had been done by a lady going round a poor district, and giving little bits of advice as to cleaning, etc., where isolation could not be obtained.

Dr. Grimshaw, Registrar-General of Ireland, said that while many objected to notification they had no right to take their private feelings into consideration when these interfered with the safety of the community. Scarlet fever was like a cask of gunpowder, and no government would allow such a cask to be kept in a place where it was unsafe for the neighbors. He greatly approved of notification and compulsory segregation.

Dr. H. Butterfield agreed with Dr. Squire that there was very little connection between the sanitary condition of a house and the outbreak of scarlet fever. He rose principally to suggest that notification of infectious diseases was of no use unless they had a hospital where they could isolate such cases. The mere knowledge that the disease existed might enable them to use disinfectants; but unless, in a large town, they could remove the patient, they had very little control over the spread of the diseases. Isolation was the great thing, but in country villages it was very difficult to prevent infection. Medical men might lecture the people, but directly they had turned their backs their orders were disobeyed and communication was allowed with the sick. One good plan had been adopted, and that was to send a nurse to the village in which cases broke out. The nurse would visit all the houses where there were cases, and by kindness win the confidence of the people, give directions as to cleansing, etc., and after she had left there was always an improvement in the general cleanliness of the people.

Dr. Vacher (Birkenhead) spoke in favor of private sanitaria for isolating cases occurring among the richer classes, who could afford to pay. He said he would simply provide furnished rooms, and the mother and servant could go with the patient and carry out the nursing themselves if they chose. He believed such places would be gladly taken advantage of. In a private house he did not believe they could maintain perfect isolation.

Dr. Groves spoke in favor of isolation, and said he had gone so far as to go round a village with a bell, call the people together and announce the names of the people suffering from infectious diseases.

Dr. Kerr protested against this, and said it was a good way to spread contagion. He did not agree with any hard-and-fast line being drawn with regard to notification, but hoped that some compromise might be arrived at.

Surgeon-Major Evatt (Woolwich) alluded to the desirability of having public scientific lectures. He observed that, while many men capable of educating the public were massed together in such congresses, nothing was done to educate the masses, although they were ready to learn.

Dr. Sykes (London) gave a case where a child, living at a milk-shop in London, had scarlet fever, and the mother refused to allow it to be removed. He did all he could, but without avail, for the parents continued to sell milk, with the result that the disease was spread. Notification was useless without the powers of compulsory removal.

Friday, August 13th—Fourth Day.

A paper was read by Dr. Norman Kerr (London) on

HYDROPHOBIA AND ITS PREVENTION.

He said he had, from personal immunity after bites from dogs, and from observation of the immunity of patients in similar circumstances, for a long time been sceptical as to the existence of true hydrophobia. He had also had under his care persons who had died from the effects of bites of dogs which had not been rabid. But the English recent experience of hydrophobia had caused him to change these views, and he now fully recognized the existence of genuine hydrophobia. In the latter part of the eighteenth century it appeared in the West Indies, and in the beginning of this century in South America. In England and Wales, during the three quinquennial periods from 1870, the average annual number of deaths from hydrophobia was forty-two. Probably not more than twenty-five per cent. of those bitten by rabid dogs recovered. No microbe had as yet been found in this disease.

Various animals became rabid as well as dogs. He approved highly of excision of the part bitten, and vigorous cauterization. Pasteur had been more successful than any other person who had treated the disease, for out of 740 cases treated by him, which had been certified to have been bitten by rabid dogs, only four had died of the disease. Two regulations, if strictly enforced, would prove effectual—muzzling of all dogs, and the capturing of all wandering dogs. In this way the disease might be stamped out.

Dr. Charles Drysdale (London) read a paper

ON THE POLLUTION OF THE RIVER THAMES AND THE UTILIZATION OF THE SEWAGE OF TOWNS.

He said that the Thames was now sadly polluted by the enormous amount of sewage poured into it at the outfall at Barking Creek, so that Lord Bramwell and the Commission had said that the state of the river was a disgrace to civilization. How could this be remedied? There was but one way, and that was to imitate Paris, Croydon, and other cities, and last of all Berlin, and utilize the liquid part of the sewage by pouring it over the fields of Essex, Kent, Hertfordshire, and Surrey, by means of pipes through which the water could be pumped up to any requisite height and then allowed to flow over the land. The main points observable in the Croydon sewage farms, which was a great success, were: 1. That the sewage should reach the fields in less that twenty-four hours after it entered the sewers in any city. It would then be almost inodorous and very fertilizing. To this effect the solid part was strained off, and at Croydon the solid part, coming from 66,000 persons, only filled one cart per diem. 2. The best kind of cultivation in sewage farms of large cities was that which limited the products to rye-grass and root crops, such as mangel wurzels.

At Croydon five or six cuttings of rye-grass were obtained during the summer, and as much as fifty tons of mangel wurzel were obtained per acre by the use of fluid sewage. The effluent at the Paris farm at Gennevilliers was quite potable, and that at Croydon was nearly so; therefore the stream was perfectly purified, and fish could live again in the water. All chemical treatment of sewage was extremely expensive and most unsatisfactory, as the quantity of sludge requiring to be removed in London would be quite enormous, and the tank alone, which was proposed in order to precipitate the sewage, would cost a million sterling. Mr. Chadwick had calculated that grass could be grown, by the aid of the London sewage, enough to feed 250,000 cows, which would greatly improve the milk-supply of London, at present so wanting in that important part of diet. The expense of pumping up fluid sewage to a height of say two hundred feet would be extremely small, and the hills of Surrey and Kent, as well as those of Essex and Hertfordshire, might all share in the fertilizing fluid. No evils resulted from well-managed sewage farms. At Croydon the death-rate near the sewage farm was fourteen per thousand, and it was quite inodorous. Market gardening should not be attempted, or it would prove a failure; but the production of milk and meat would prove a great success, and was the only real solution of the sewage question.

Dr. Michael Taylor (London) read a paper

ON DIPHTHERIA IN CONNECTION WITH DAMP AND MOULD.

In one outbreak he had seen, the roof of the house leaked and mould appeared, when in a few days the children sleeping in the room were attacked. In another case, old clothes and a number of calf-skins were stored in a room, and these became mouldy and caused the disease.

Dr. Charles R. Drysdale read a paper

ON THE SUPERIORITY OF ANIMAL VACCINE.

In 1877 he had studied animal vaccination in Brussels, at Dr. Warlomont's institution, and then had recommended in the Medical Society of London that calf-lymph should take the place of long-humanized lymph for three reasons: (1) Because in times of epidemics of small-pox calf-lymph could be had in quite unlimited quantities; (2) because it could not be accused of conveying syphilis; and (3), and by far the most important of all, because evidence showed that animal vaccination was considerably more protective against small-pox than long-humanized lymph. This latter was proved by the remark of Dr. Warlomont, that in the terribly severe epidemic of small-pox, 1870–71, no person who had been vaccinated with animal lymph took the disease, and by the evidence given by Dr. Martin, the great vaccinator of the United States, recently deceased, that he had offered a reward of £100 to anyone who should show him a case of small-pox which had occurred in a patient vaccinated by him with animal vaccine, and that no one had been able to claim the reward offered. Mr. Babcock, a chemist of Brighton, had clearly shown by inoculating some two hundred cows with small-pox matter, and obtaining a vaccine vesicle in thirty-three cases, that small-pox and vaccine were the same disease, and that when we vaccinated ourselves we merely took a mild attack of small-pox. At the beginning of the century, when the illustrious Jenner was alive, human lymph was more preventive than now, because nearer to animal vaccine, and we should, therefore, as had been done in the United States, abandon the use of humanized arm-to arm vaccination, and have recourse solely to calf-lymph for vaccination. He proffered a resolution to that effect.

Dr. Murphy greatly approved of calf-lymph, but would not advocate the present system.

Dr. B. James seconded the resolution.

Dr. Squire proposed an amendment that arm-to-arm vaccination is necessary and useful.

Dr. Glazier moved that arm-to-arm vaccination should be maintained.

Dr. Poole seconded, and this amendment was carried.

SECTION IN THERAPEUTICS.

FRIDAY, AUGUST 13TH—FOURTH DAY.

The Section met at 11 A.M. for the purpose of undertaking a discussion which had been announced for several weeks would be opened by DR. SAUNDBY,

ON THE ACTION OF DRUGS IN ALBUMINURIA.

On the appointed day, when those interested in this subject had duly assembled, Dr. Saundby did not turn up, and although his paper will probably appear in the "Journal," no discussion of it could take place, as it was not read, and those of us who were most deeply interested and anxious for the subject to be fully discussed, and willing to express our own views upon it, had the choice of leaving the Section or listening to other papers, but no opportunity of hearing anything on the topic which had attracted us. Of course we cannot tell for certain why Dr. Saundby was absent, but there was a whisper that he had gone for his holiday. I venture to state that anyone who undertakes, weeks in advance, to commence a discussion on a specially selected subject ought to make considerable sacrifice in order to fulfil his engagement, and I would add that the *reading* of a lengthy paper is not the best way to open a debate. Dr. Saundby similarly failed to appear both at Cardiff and Belfast, although he had on each occasion been announced to take part in discussions.

DR. J. BLAKE read a paper on "The Climate of California in Relation to the Treatment of Consumption."

DR. MITCHELL BRUCE read one on "Morphine in Diabetes."

MR. ST. GEORGE related numerous experiments with "Malacta in the Treatment of Rheumatism."

DR. C. R. DRYSDALE read his paper

ON MERCURY,

of which the following is an abstract:

He said that at the present moment a more positive view was arising as to the way in which virulent diseases, such as syphilis and even phthisis, should be treated. A great deal of this was due to the revolution which had silently taken place of late years in the domain of medicine, owing to the discoveries of M. Pasteur as to the cause of fermentation and of virulent diseases. Although the germ of syphilis had not been clearly seen, there was no doubt that it, like the germ of hydrophobia, existed, and hence there seemed much likelihood that the two remedies, mercury and iodine, which experience had shown to be of service in the treatment of that disease, would be found in the near future to act in the tissues in a similar manner to that in which they acted when applied externally in surgical diseases. The question would then arise—Could mercury be called an antidote in syphilis, as sulphur ointment was in scabies, or whether could it be described by such an ambitious title? Historically, it would appear, according to Astruc, that when syphilis was first treated, at the beginning of the sixteenth century, mercurial inunction was tried on the patients because it had been found to cure scabies, and ever since that date there had been a certain number of authorities who had considered that mercury could cure syphilis, or that it possessed antidotal properties against the disease. Among recent authors, for instance, the late Mr. Solly believed that mercury often cured syphilis at the outset. Mr. Erichsen had also expressed his opinion in the same direction. Mr. H. Lee gave evidence before the Lords' Commission, in 1882, that mercury, given during the period of the initial sore, sometimes prevented entirely the appearance of any further symptoms of the disease. The most positive in this affirmation was Mr. Jonathan Hutchinson, who, in his Lettsomian lectures, delivered in 1886, alleged that it was quite easy, by the proper administration of small doses of mercury and chalk, during the period of the chancre, to put an end to the disease altogether, so that no further symptoms should ever show themselves. Mr. Hutchinson, then, evidently believed that mercury was an antidote in syphilis. This evidence was of the highest importance, coming as it did from such very high authorities.

Dr. Drysdale could only say that he much regretted that his own experience entirely failed to corroborate this view. Briefly, he had never been able to prevent the occurrence of some form of secondary symptoms by the mercurial treatment of the chancre, and had always been accustomed to give a prognosis in that direction.

Dr. Lancereaux, in 1873 ("Traité de la Syphilis"), also denied that mercury had any power in warding off the second stage, or even preventing the occurrence of tertiaries. Diday, also, affirmed that mercury did not prevent the appearance of secondary eruptions, and did not even weaken them when given in the chancre. Then, again, Dr. A. Fournier, although convinced that mercury greatly lessened the severity of the secondary disease and the expectation of tertiaries, still was silent on the antidotal properties affirmed by Mr. Hutchinson, and employed it for ten months, in interrupted courses, for the space of two years. Another view was that of Dr. Keyes, of New York, who affirmed that mercury was an antidote to syphilis locally as well as generally. That physician considered small doses of mercury as tonic, and employed them continuously for a period of three years in syphilis, in all cases. One of the difficulties in the way of arriving at a judgment on this question consisted in the fact that syphilis in modern times was usually a very mild disease, consisting in many cases of nothing more than the chancre and a mild roseolar eruption, so that, in many cases, the disease required no treatment. In conclusion, Dr. Drysdale said that, although both mercury and iodine were doubtless antidotal to syphilis, he could not admit that mercury could nip the disease in the bud, although his practice now was to give it always in very small doses, such as one grain of mercury and chalk twice daily, during the early period. He thought that its chief value was to be seen in severe outbreaks of the disease, in iritis, in disease of the retina, and early brain symptoms, and also, to a certain degree, in warding off the tendency toward tertiary disease, a property which Dr. Alfred Fournier enthusiastically ascribed to it. He thought it should be rarely used in tertiary syphilis, or, at any rate, that iodide of potassium should form the main treatment, and mercury only the adjuvant in that stage. Iodide of potassium was the true antidote to the germ of syphilis when that had become mitigated by age in the human system.

PROFESSOR VICTOR HORSLEY then read a paper, prepared by himself and DR. SEMON, on

AN APPARENTLY PERIPHERAL AND DIFFERENTIAL ACTION OF ETHER UPON THE MUSCLES OF THE LARYNX,

upon which DR. DONALDSON made some pointed criticisms, and referred to his own important experiments in this direction.

DR. ISAMBARD OWEN then read an abstract of the report of the Collective Investigation Committee on "Hamamelis Virginica." No discussion on this subject took place, and, as the time was now nearly expired, it was impossible to resume the important debate on "Antipyretics," which had been adjourned. This is the more to be regretted as it was introduced by Dr. Carter in an unexceptionable manner. He did not read a lengthy paper, but presented an account of his hospital practice in tables, to which the members could refer, and by way of introduction to the debate spoke on the several conclusions to which he had been led.

THE OVARIES: The Lord gave and the man taketh away. Happy is the man who hath his jar full of them.

SECTION IN OTOLOGY.

THURSDAY, AUGUST 12TH—THIRD DAY.

The day commenced at 9.30 A.M., with the exhibition of living patients at the Throat and Ear Dispensary.

At 2 P.M. the reading of papers was resumed.

DR. DELSTANCHE, of Brussels, related

A CASE OF A REVOLVER-BULLET IN THE EAR,

and afterward addressed the Section on foreign bodies in the substance of the lobule. As both these papers were read in French, many members found it difficult or impossible to follow, and there was no discussion; but as the papers related only to the facts of cases little could have been elicited.

DR. URBAN PRITCHARD then read a paper on "Counter-irritation in the Treatment of Diseases of the Ear." MR. BROWNE took exception to some of Dr. Pritchard's opinions, but advanced no solid argument.

DR. SYMINGTON read a paper on "The Anatomy of the Ear in the Child," in which he stated that the external meatus was not nearly so deep in children as is commonly supposed, a point of considerable importance when any kind of manipulation is undertaken. Further, that the mastoid antrum is much more superficial in children than in adults, and in illustration of the anatomical points he laid down he showed sections of the skull to exhibit the relations of the parts, the position of the Eustachian tube, etc.

MR. SPENCER WATSON opened a discussion on "The Complications of Nasal Polypi," which he minutely and carefully described. DR. DUNDAS GRANT made a few remarks.

DR. WALTER WOLSTON read a paper on "The Treatment of Nasal Polypi by the Electro-Cautery," in which he related several cases. He showed the battery he employed, purchased from the Scottish Electric Co.

Some other papers were taken as read, the authors not being present when called upon.

FRIDAY, AUGUST 13TH—FOURTH DAY.

The Section met at 11 A.M., when an extremely interesting demonstration was given by DR. DELSTANCHE, who exhibited and described a number of ingenious instruments, including a

MODIFICATION OF CHARRIÈRE'S NASAL SPECULUM,

Maekel's post-nasal mirror, together with cauteries, iron wire, numerous tubes and other appliances; also whalebone clips for use in the treatment of fractures of the nose, and a syringe intended for the purpose of passing fluids through the Eustachian cavity, a practice which will probably not be generally approved.

MR. SPENCER WATSON exhibited a ring-knife, and DR. WOLSTON some other apparatus.

Some of the members were much interested in the exhibition of instruments, and offered suggestions and criticisms. This closed the business of the Section.

MANUFACTURE OF QUININE BY SYNTHESIS.—It is said that Mr. Cresswell Hewett, of England, has discovered a process of making quinine by which the price of the drug may be reduced to about six cents an ounce. The synthetical manufacture of quinine was first suggested to Mr. Hewett in 1869 by the late Dr. Mattheson, of St. Bartholomew's Hospital. The importance of this discovery is rendered greater by the fact that, while hitherto we have been depending for our quinine on the cultivation of the cinchona tree, from whose bark only about two per cent. of good quinine can be extracted, ninety-eight per cent. being valueless, the drug can now be manufactured without limit, by a very simple process, from an article which can always be got in abundance in any part of the world.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

IMPROVEMENTS TO THE METROPOLITAN MEDICAL SCHOOLS —THE BRITISH ASSOCIATION—JOINT MEETING OF THREE SECTIONS TO DISCUSS THE THEORIES OF COLOR-VISION—DOCTORS AND THEIR DOOR-PLATES.

LONDON, September 11, 1886.

THIS is the season of the year at which additions and improvements are being made to the buildings of the medical schools. In two, at least, improvements are being carried out on a most extensive scale. These two are respectively the most easterly and the most westerly of the medical schools, one being that attached to the London Hospital, at Mile End, the other that in connection with St. Mary's Hospital, at Paddington. The school buildings at the London Hospital are being virtually rebuilt. Only one lecture theatre has been available for class purposes during the past session; the fireplace in the dissecting-room has been bricked up, and loud have been the complaints from both the students and teachers as to the lack of accommodation of every kind, and the uncomfortable conditions under which—especially during the winter months—all the work has been carried on during the past year. Now, however, the work is approaching completion, and the London Hospital authorities may shortly be congratulated on the possession of one of the finest sets of buildings in London for the purposes of medical teaching. A residence for students is being erected as part of the new buildings. The improvements at St. Mary's Hospital are also extensive, and affect both the hospital and the medical school buildings. The drainage at the hospital has been found to be so bad that the hospital has been closed, so as to give the workmen free scope. A new post-mortem theatre is being constructed, with all modern improvements, and in close communication with it, and forming part of the new block of the school buildings, a well-arranged pathological laboratory is being erected, with every appliance not only for pathological observation, but for original research, including a separate room devoted to bacteriology. St. Mary's, although the youngest of the metropolitan medical schools, having been founded only in 1851, is, I believe, the first to provide a well-equipped pathological laboratory. Its authorities are, therefore, to be commended for their enterprise, especially as it is only three years since a very large sum was expended in adding very largely to the existing school buildings.

The annual meeting of the British Association for the Advancement of Science came to an end a few days since. A very interesting, and also unprecedented, feature of the meeting was the joint meeting of the members of the sections in Biology, Mathematics, and Physical Science. This was to discuss the physical and physiological theories of color-vision—a subject always interesting to physiologists, and doubly so to ophthalmologists and neurologists. Professor G. H. Darwin said this was the first time any two sections of the Association had met together to consider a subject that concerned both. The topic of consideration lay at the meeting point of physiology and physics.

Lord Rayleigh explained the relation between light and color. The difficulty of color-vision was caused by the fact that different color-waves had different degrees of intensity under different conditions, and thus, when they mixed in various degrees, they produced vastly different effects. As a consequence, the eye could not be depended upon to tell what was the physical composition of mixed light. After discussing the theory of color, showing that the spectrum disclosed red, green, and violet as being the primary colors, he touched upon the

question of "color-blindness," and asserted that there was really no such thing as absolute color-blindness, in the sense of a person having no discrimination for color at all. Dr. Arthur König, of Berlin, gave the results of experiments with the spectroscope. Dr. Michael Foster said the physiological view was antagonistic to that of physicists in several radical points. In the course of his remarks he declared that the pernicious practice of smoking, if long persisted in, and particularly if the smoker confined himself to one kind of tobacco (N.B. Dr. Foster smokes incessantly), produced color-blindness so as to destroy the perception of red. All people were more or less color-blind in the outside of the pupil, but those who were called color-blind really had, as it were, a patch cut out in the middle of the retina, where they were color-blind. They could not see red, or they could not see green. They called green yellow, and so on. There was the further stage, where they had no sense of color at all. The more physiologists knew about the living body, the nearer they drew to the completion of the theory that there were two processes always going on in the body—a building up and a breaking down. In the theory of color-perception this idea was carried out in the supposition that certain rays of light, acting on the retina, broke down the substance of the retina and produced another sensation of color. When the breaking down went on, the sensation produced was yellow, and when blue rays fell upon the same substance of the retina it was built up. Then they came to a point where the breaking down and the building up neutralized each other, and they had no sensation of color at all, or, in other words, color-blindness.

A curious chapter might be written on the history of doctors' door-plates. These, like most other things, have a fashion of their own, and one which changes from time to time. Years ago, when open surgeries were more common than they are now, the possessor of one would commonly inscribe on the door "Smith, Surgeon"—or whatever his name might be—and if he could secure a corner house with a large door at the corner, and put "Smith" looking one way and "Surgeon" the other, he felt happy. Nowadays open surgeries are at a discount, and although their place has been taken, to a certain extent, by cheap dispensaries, the owners of which occasionally paint up their names over the front in the style of small shopkeepers, still the better class of general practitioners avoid both open surgeries and cheap dispensaries. The usual style is "Mr. ——, Surgeon," and where the practitioner has become well known and lives in an aristocratic neighborhood, the "Surgeon" is often dropped. A university graduate who engages in general practice generally styles himself Dr. simply—thus "Dr. Graduate"—or, occasionally, "John Graduate, M.D." (or M.B., as the case may be), "Surgeon" being added or not, according to taste. Since the advent of the L.R.C.P. diploma, the magic inscription "Physician and Surgeon" has found its way on to numerous door-plates, the placid conviction being entertained that the diploma of L.R.C.P. conveys the title and standing of a physician to its possessor. As the gentlemen who so label themselves are invariably engaged in general practice, and mostly dispense their own medicines, the contrast between what they are and what they profess to be is sufficiently striking. A good many doctors who have taken the L.R.C.P., either at London or Edinburgh (mostly the latter), dub themselves Dr. on the strength of it, a proceeding to which just objection is often taken, especially when it is maintained that a university graduate of medicine, who has only the bachelor's degree (M.B.), has no right to any title but Mr. A wide gulf, however, separates him from the holder of a mere diploma; while at some universities (*e.g.*, Oxford) the only bar between his M.B. and the M.D. is the keeping of so many terms and the writing a dissertation. Bonâ-fide hospital physicians generally sign themselves simply "Dr. Blank," or, in rare cases, "John Blank, M.D." I have seen the following on a physician's door-plate, "Mr. ——, M.B.," while one young physician of my acquaintance simply announces his name on his door-plate, preceded by his initials, but without other prefix or affix. Consulting surgeons generally put "Mr. ——" on their doors, and nothing more. The late Mr. Maunder (imitating the Dublin fashion) had "Surgeon Maunder" engraved on his brass door-plate. Mr. Hutchinson, when in practice in the City, announced himself to the passer-by as "Jonathan Hutchinson," without further addition, a mode which he dropped for the more conventional "Mr. Hutchinson" when he moved westward. Such physicians or surgeons as have attained the dignity of a baronetcy or knighthood do not usually hide their light under a bushel, but make it as public as black paint on a brass plate can do it for them. The simple knight has to be content with "Sir William Blank," while his more distinguished professional brother who has obtained the hereditary distinction has the privilege of adding to the above the affix "Bart." The size of door-plates is a matter in which considerable diversity of taste is exhibited. A walk down Brook, Grosvenor, or Harley Streets will bring to one's notice a very large variety of these silent advertisements. The older men mostly have their names in very large letters on the brass plates, as was the custom of a bygone age. Where, by long usage and frequent cleaning, all the paint has worn off, even an inscription in large-sized letters is by no means easy to decipher. A fad of the younger generation is to have their names engraved in such a miniature fashion as to be literally illegible from the pavement. In some cases a veritable sea of shining brass is left around the small island of black paint in the centre; in others, this expanse is reduced to the smallest possible limits, and the plate made no larger than is absolutely necessary to contain the name. I have spoken of brass plates, but I have seen a copper door-plate, or at least one to which acid had been applied so as to dissolve away the zinc and show up the copper. I once saw a physician's name painted on the woodwork of the door. Of all the claustral announcements I have ever seen, I think the strangest was one I saw once in a provincial town (Bath), viz., "Mr. ——, Dermatologist."

OUR PARIS LETTER.

(From our Special Correspondent.)

AN INTERESTING CASE OF GASTROSTOMY FOR REMOVAL OF A FORK FROM THE STOMACH.

It will be remembered that about ten years ago a great sensation was caused by an operation, which was successfully performed by M. Léon Labbé, the well-known surgeon, on a young man who had swallowed a fork. A similar case has been lately presented at the Academy of Medicine by Dr. Polaillon, surgeon of La Pitié Hôpital.

It was that of a juggler who was in the habit of "swallowing swords and walking-sticks" in public. On August 5th last, while at Luchon, the man, by way of diverting some of his friends, pushed an ordinary-sized fork down his throat, but held the prongs to prevent its slipping into the stomach. Feeling a sense of suffocation, he made a deep inspiration and let go the fork. He made several fruitless attempts to withdraw the fork, which gradually descended into the stomach.

Beyond a little spitting of blood, due to the excoriations caused by the fork in its passage along the pharynx and œsophagus, he experienced no inconvenience, and continued his juggling exercises next day as if nothing had happened to him. After a few days he felt some uneasiness in "the pit of the stomach," and consulted several medical men, one of whom sent him to Dr. Polaillon, who admitted him into his ward at La Pitié Hôpital on August 14th, that is, six days after the accident. Notwithstanding the slender form of the patient, the fork, which was of tinned iron and of large size, could not be felt.

The patient remarked that he suffered when his stomach was empty. He was therefore obliged to eat frequently to prevent pain. The functions of the stomach and of the intestines were normal, and there was no vomiting nor spitting of blood. An œsophageal tube, charged with a metallic stylet, was introduced into the stomach, with the expectation of feeling a sensation similar to that produced by the presence of stone in the bladder, but the result was nil. This threw some doubt in the mind of the surgeon as to the correctness of the patient's statement, particularly as it appeared to him unlikely that a man who was in the habit of swallowing swords could suffer so much pain as he did from the passage of the small tube into the stomach. To remove all doubt from his mind, M. Polaillon had recourse to the ingenuity of M. Trouvé, the well-known electrician, who proposed the following means of exploration for the establishment of the presence of the offending body in the stomach: 1. A magnetic needle of extreme delicacy turned toward the epigastric region of the patient whenever the latter approached the needle, and it was curious to notice that the needle followed the patient's movements. 2. A large electro-magnetic apparatus, placed a few millimetres from the abdominal wall, suddenly produced, while the electric current was being passed over, a slight arched elevation of the skin, as if a body intra-abdominal rushed toward the electro-magnetic machine. This was considered conclusive for the diagnosis, and an operation was decided upon. Gastrostomy was performed according to the method adopted in the case of M. Labbé's patient. The stomach was opened about the level of the ninth rib, and an iron fork twenty-one centimetres long, and weighing fifty-nine grammes, was removed. The patient was put under chloroform, and all antiseptic precautions, including the carbolic spray, were employed. Up till now, in operations of this kind, the lips of the cutaneous wound and those of the stomach were sutured together, thus leaving a fistula, which eventually healed up. M. Polaillon, for the first time, sutured up the stomach completely, leaving the organ free in the abdominal cavity. The patient is going on favorably, and the present is the nineteenth case on record of such accidents.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 12 to September 18, 1886.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. Resignation accepted by the President, to take effect November 5, 1886. S. O. 212, A. G. O., September 11, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 18, 1886.

SIMONS, M. H., Passed Assistant Surgeon. Detached from the Alert and placed on waiting orders.

NORFLEET, E., Passed Assistant Surgeon. Detached from the Alert and placed on waiting orders.

BOGERT, E. S., Medical Inspector. Ordered to Navy Yard, New York, September 28, 1886.

HIGH DEATH-RATE IN KANSAS CITY.—During the week ending August 21st, the death-rate of Kansas City reached the very alarming figure of 31 per 1,000 inhabitants. This is by far the highest death-rate ever known in Kansas City, the average for the past fifteen years having been about 15 per 1,000. The city is said to be in a very unsanitary condition, and the high mortality has been attributed to that cause.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 18, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	11	12
Scarlet fever	13	0
Cerebro-spinal meningitis	1	1
Measles	31	6
Diphtheria	35	24
Small-pox	0	0
Yellow fever	0	0

BERI-BERI IN INDIA.—The Dutch East-Indian army has suffered greatly from this disease in the past few years. From 1879 to 1883, inclusive, 17,722 soldiers were attacked, an average of 3,544 a year; and in 1884 there were 5,388 treated for beri-beri, of which number 235 died and 842 were incapacitated for further military service, and of the balance more than half were invalided and rendered unfit for active duty in the field.

DIPHTHERIA IN SPAIN.—Diphtheria has been for some time very prevalent in Madrid and Granada, attacking many adults as well as children. In Granada the schools have been closed, and many of the soldiers in garrison there have suffered severely.

DEFICIENT HOSPITAL ACCOMMODATIONS IN ATLANTA.—Complaint is made that there is no good hospital in Atlanta. *The Medical and Surgical Journal*, of that city, says that it is shameful that a city of 50,000 inhabitants should be so poorly provided with accommodations for the sick poor, and urges the establishment of a hospital with from 75 to 100 beds, and furnished with all the necessary appointments.

JEWISH PHYSICIANS IN RUSSIA.—The medical department of the Russian Government has been collecting statistics concerning the number of Hebrew physicians, apothecaries, etc. According to the Odessa *Listok* there are in that city 99 Jewish physicians, 6 of whom are women, 2 veterinary surgeons, 9 dentists, 35 accoucheurs, and 23 apothecaries. The object of the enumeration is not known, but it is supposed that the government intends to limit the number of Hebrews in the medical profession as it has already done in the army.

PROVIDING FOR THE FAMILY OF PROFESSOR VON GUDDEN.—A gratuity of £10,000 has been granted from the Bavarian Civil List to the widow of Professor von Gudden, of Munich, who perished with the late King of Bavaria in the lake at Castle Berg. He left a family of eleven children.

CONSUMPTION OF TOBACCO IN EUROPE.—M. Paul Leroy-Beaulieu, writing in the *Economiste Français*, gives the following figures, showing the quantity of tobacco consumed in the different countries of Europe, and the rate per 1,000 inhabitants: Spain, 110 pounds; Italy, 128 pounds; Great Britain, 138 pounds; Russia, 182 pounds; Hungary, 207 pounds; France, 210 pounds; Denmark, 224 pounds; Norway, 229 pounds; Austria, 273 pounds; Germany, 336 pounds; Holland, 448 pounds; and Belgium, 560 pounds.

THE GERMAN ANTHROPOLOGICAL SOCIETY. — The seventeenth annual meeting of the German Anthropological Society was held in Stettin on August 10th and 11th, under the presidency of Professor Virchow, and was well attended by members from all parts of Germany and from foreign countries.

A CHANGE IN MEDICAL STUDY IN VIENNA.—It is stated that after the beginning of next year the vacation courses of the Vienna Medical Faculty will be discontinued.

A LONG LIFE.—Leopold von Ranke, now more than ninety years of age, presents the anomaly of a man who has never taken any physical exercise and is yet in perfect health. The great German historian has almost lived in his library, working for fifteen hours a day, and he has laid out more work which he hopes to complete before his hundredth birthday.—*Medical Times.*

LATE CHILDBEARING.—Dr. A. O. Banes writes in the *Medical Brief* that there is an aged and respectable couple residing in St. Joseph, Mo., the husband seventy-one and the wife sixty-five. The enterprising woman gave birth to a fine, healthy boy, much to the surprise of their kind neighbors and to themselves, as she thought an ovarian tumor was developing.

THE BALTIMORE UNIVERSITY OF MEDICINE recently purchased St. James' Methodist Episcopal Church in Baltimore, and has removed its free dispensary to the building. Among the improvements will be two large lecture-rooms, two hospital-wards, office, and faculty-rooms. It is expected to be ready for fall lectures. The Sisters of Charity will have charge of the sick, and as soon as possible apartments will be erected for their accommodation.

THE ANNUAL MEETING OF THE GERMAN OPHTHALMOLOGICAL SOCIETY was held in Heidelberg on August 9th. It was attended by one hundred and fifty visitors from all parts of Europe. The Von Gräfe gold medal, for the most valuable contributions to ophthalmology during the last ten years, was presented to Professor von Helmholtz, of Berlin.

ANOTHER CASE OF RETRACTION OF THE PENIS.—Mr. Thomas F. Raven writes, in *The Lancet* of August 7, 1886, that he is led to report the following case from reading of a similar instance recorded by a Russian physician, Dr. Ivanoff: The patient, a healthy, steady, single man, aged twenty-seven, shortly after he had gone to bed one night, felt a sensation of cold in the region of the penis. He was agitated to find that the organ, a fairly developed one, was rapidly shrinking, and was, he thought, finally retiring. Mr. Raven was called, and found him highly nervous and alarmed. The penis had almost disappeared, the glans being just perceptible under the pubic arch. The skin of the penis alone was visible, and looking as it does when the organ is buried in a hydrocele, or, in an extreme degree, as it does after death by drowning. The writer reassured him and gave some ammonia, and found next day that the natural state of things had returned. But the patient remained weak and nervous for some days. He could give no explanation of the occurrence, and the unnatural condition has never returned.

MEDICAL INSTINCT IN ANIMALS.—Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek dark, airy places, drink water, and sometimes plunge into it. When a dog has lost its appetite, it eats that species of grass known as dog's grass, which acts as an emetic and a purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps, as far as possible, in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of the ant, and other ants came and covered the wounded part with a transparent fluid secreted in their mouths. If a chimpanzee is wounded, it stops the bleeding by placing its hand on the wound or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog on being stung on the muzzle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it. This animal recovered. A terrier hurt its right eye. It remained under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment, rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye; again licking the paw when it became dry. Animals suffering from traumatic fever treat themselves by the continued application of cold water.

THE TENESMUS OF DYSENTERY, or diarrhœa, or the vesical tenesmus of cystitis, may be very much relieved by placing a pillow under the buttocks, and making the patient lie upon his back in such a manner that the parts are thus raised somewhat higher than the other portions of the body.— *St. Louis Med. and Surg. Journal.*

WHAT NEW YORK DRINKS.—A recent official report by the New York health authorities states that the Croton water-shed embraces 239 square miles, and has a population of 20,000, with 1,879 dwellings, and as many privies, about as many barn-yards, pig-pens, and cesspools, besides cemeteries, graveyards, slaughter-houses, and other sources of contamination, and with no drainage except by the surface which conducts it to the aqueduct. Yet the Croton is the best water-supply enjoyed by any large city in America or elsewhere.—*The Sanitary Era.*

ADVICE TO PHYSICIANS CONTEMPLATING POST-GRADUATE STUDY IN NEW YORK.—The New York correspondent of the *Mississippi Valley Medical Monthly* writes: "Permit me to offer a few words of advice to those of your readers who may contemplate a visit to New York. Briefly it is this: Make up your mind before you leave home what special branch or branches you wish to study up, and when you get here devote your entire time and energy to obtaining just what you want. This advice is based on my own, and the experience of a great many of my fellow-students here. When I first came here I was led hither and thither by things that attracted me, to the detriment of the branches which I wished to master. No difficulty will be found in getting what is desired. The doctors of New York are eminently a teaching class, and if one cannot teach you what you want he is sure to know of some good man who can."

A LARGE VESICAL CALCULUS.—Mr. Thomas Smith reports, in *The Lancet* of August 7, 1886, the removal of a stone weighing 24½ ounces from the bladder. The stone was ovoid in shape, and measured 13 inches in its largest circumference and 9½ in its smallest. On section it was found to be dense in structure and regularly laminated, and to consist of phosphates externally, with a large oxalate nucleus. The patient was a soldier, forty-three years of age. The calculus was removed entire by the suprapubic operation, and the patient recovered completely.

THE SOOCHOW MISSION HOSPITAL.—We have received the third annual report of the Soochow (China) Hospital for the year 1885. There were 203 patients treated in the hospital, and 9,744 in the dispensary, giving a total of 9,947 for the year. The hospital is under the care of the China Mission of the Methodist Episcopal Church, South. Dr. W. R. Lambuth has retired from the management of the hospital, and has been succeeded by Dr. W. H. Park, a former student in the polyclinic of this city. There is a medical school attached to the hospital, and a request is made for $500 for the purchase of papier maché models from which to demonstrate anatomy to the students.

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Original Articles.

SOME CONSIDERATIONS ON HYSTERIA.[1]

BY MARY PUTNAM-JACOBI, M.D.,

NEW YORK.

NOTWITHSTANDING the voluminous literature which exists on hysteria, something always remains to observe and describe in it. And this is to be expected when it is remembered that hysteria implies disarrangement of the functions of any part of the nervous system—in its four spheres of intelligence, mobility, sensibility, and visceral neurility. Every advance in our knowledge of these mysterious functions must, therefore, lead to some new point of view in regard to hysteria, or to mental, motor, sensory, or visceral neurosis. Is it possible at the present day to formulate the fundamental condition of hysteria in such a way as to bring it into harmony with the facts of the hysterical temperament, of the general neurotic diathesis, of the vaso-motor spasms, of the special, mental, motor, and sensory phenomena of hysteria, and of the relations of the developed disease to the reproductive organs on the one hand, and to moral and social conditions on the other?

It seems to me that we can assert the following to be the two-fold condition fundamental to hysteria: There is, in it, a congenital or acquired deficiency in the power of nerve-elements to effect the storage of force in nerve-tissues.

Fundamental condition of hysteria.

This can only be overcome by increasing the amount of stimulus to which these elements are subjected. Conversely, the elements of those centres, which are subjected to a preponderance of stimulus, will perform the function of storage most effectively, and, in so doing, will acquire preponderance over the others and this is done by the sensory centres of the brain.

These centres, connected with the nerves of special sense and of common sensibility, are, from the beginning of life, exposed to the most incessant stimulation, from the constant impact upon them of centripetal impressions. The registration of these impressions is attended by chemical synthesis within the cells (Meynert) by "negative work" (Wundt). Such synthesis implies the storage of oxygen into complex chemical compounds, in which it becomes latent. These may be called force-compounds, because upon their explosive decomposition depends the liberation of energy, or force, the "positive work."[2]

Thus the synthetic nutritive processes of the central nervous tissues are closely associated with their functional stimulation through the arrival of impressions from the periphery. "The optic nerve, which resembles in structure the central white substance, undergoes changes within two or three days of extra-uterine life, which far exceed those changes which would take place during a much longer period of intra-uterine life. This shows most distinctly that the nutrition of central nervous tissues is greatly aided by sensory stimuli." "The centripetal nerve-tracts are the keys which start the mechanism of the entire central nervous system, and we see that the peripheral nutritive influence is indicated by the special order in which nerve-tracts acquire their white substance" (Meynert, "Psychiatry Transl. Sachs.," pp. 268 and 269, 1885).

As far as the sensory centres are concerned, there is no indication that their storage capacity in hysteria is deficient; indeed, the preponderance of sensation over centrifugal force, motor or mental, would lead us to infer a relative excess of storage in these centres. But the theory of deficient storage of force in hysterics is based on their inability, as compared with persons soundly organized, to bear fatigue, mental exertion or emotion, or privation of food, or fresh air; peculiarities which are noticeable even in persons who, at the time of trial, are in good health, with their constitutional tendencies latent.

Exertion, mental or physical, implies nervous discharge; the capacity for this is proportioned, partly to the amount of force-material previously stored in nerve-cells, partly to the capacity of these to rapidly store up new material, even while discharging-processes are going on. Deficiency of storage necessarily accelerates the moment when consumption of force-material must be complete, unless this can be rapidly renewed—hence accelerates the approach of fatigue. But the same deficiency in storing processes, which would lower the amount of accumulated supply, might be expected to render storage during action, difficult or impossible. The hysteric, therefore, should require more absolute rest for recuperation after exertion than is necessary for a normal person. The same circumstances would render either privation of food or of abundant air-supply sooner intolerable. Hence it is the hysteric who is most likely to faint in a badly-ventilated room.

The portions of the nervous system whose capacities are impugned by these facts, are those which are associated with centrifugal impulses or with the liberation of energies in action. These centrifugal energies are of two kinds; motor and mental. The stimuli which provide for the storage of force-material in the nerve-centres concerned in mental and in motor action are more indirect than the stimuli of the sensory centres. It seems to be the discharge of motor energy, which, possibly by emptying the cell of a certain amount of material, principally determines the acquisition of new material from the blood, and its storage in forms of higher complexity. It is well established that the nutrition of the muscular fibre depends largely upon muscular action, which involves repeated explosive decompositions and elimination of material from storage cells. In centres of incessant reflex action, this stimulus from its own function may be supplied as constantly as is that of the sensory centres. But wherever volition is involved there exists the possibility of avoiding action and, by so much, of lessening the amount of stimulus which should be supplied to the motor mechanisms.

Deficient centrifugal energy from deficient storage of force.

In the cortical motor centres of the brain, according to the bold and ingenious hypothesis of Meynert, a second form of stimulus exists, derived from the registration of impressions during the performance of reflex-motor acts by subcortical mechanisms. Of each such act an impression or image is said to be registered upon the cortical cells connected with the nerves supplying the contracting muscles. The impression is called by Meynert an "innervation sensation," and is supposed by him to be transmitted to the thalamus from nuclei of the tegmentum, which are themselves connected with the lenticular body, and from the

Meynert's theory of cortical registration of reflex acts.

[1] The nucleus of this paper was read before the Neurological Section of the Academy of Medicine, June 11, 1886.

[2] The negative work is the first result of centripetal stimulation of a nerve-centre (central galvanization). During it no tangible phenomenon occurs. It is followed by the positive work, centrifugal impulse resulting in muscular contraction. Wundt: Mechanik du Nerven, 1871.

thalamus to the cortex, by the fibres of the corona radiata. The cortical cells are thus rendered "spectators" of all reflex acts. The registration of the impression is attended here, as elsewhere, by chemical synthesis, *i.e.*, by the storage of material destined for the future elaboration of force.

The sensory impression which has initiated the reflex act is also registered in the cortex, and, when transmitted to other cortical areas associated with that which has received this impression, it becomes transformed into a secondary, that is, into an ideal impression. The revival of such a secondary impression, thus the memory of the original sensation, tends to revive the image of the motor act originally associated with it, and which has been registered in the motor centres. The revival of this image liberates energy in a centrifugal direction, along the fibres of the pyramidal tract to spinal nerves and voluntary muscles. This energy, due to intra-cerebral stimulus, is said to be voluntary; but it is directed to the same nervo-muscular mechanism, as had already accomplished motor acts of the same form as those now designed, *i.e.*, the subcortical reflex mechanisms.[1]

Thus the stimuli to storage in the cortical motor centres are: 1st, the registration of impressions of innumerable reflex motor acts, performed involuntarily, and before conscious volition is possible; 2d, the liberation of energy under the influence of intra-cerebral impulses associated with memorized and with secondary impressions. This latter constitutes the performance of voluntary acts, or, in other words, is the exercise of the positive function of the centre, the evolution of its positive work.

Stimuli to storage in cortical motor centres.

The "latent areas" of the cortex (Exner), unconnected with either motor or sensory tracts, continually receive through association-fibres and the gray net-work of the surface secondary impressions obtained by revival of those which had been originally registered in the motor and sensory regions. Consciousness is gradually built up of masses of such secondary impressions, and thus is finally traceable to memories of the impressions made on the organism by the outside world, and of the movements which have been performed by the organism in direct or indirect response to these impressions. It is to be presumed that the registration of the secondary impressions is attended by chemical synthesis in the registering cells, similar to those which accompany the registration of primary impressions.

Development of consciousness.

And further, we must infer from the foregoing considerations that each ganglionic cell or area of the cortex acts both as a receiving and as a discharging centre. In registering sensory, motor, or revived (ideal) impressions, its protoplasm performs a work of chemical synthesis. In transmitting impressions, either in a centrifugal or in an intra-cerebral direction, the same protoplasm effects a chemical decomposition, whereby energy is liberated.

The same reasons which compel us to infer that, in motor areas, this liberation of energy acts as an indirect stimulus to storage, apply to all the areas of the cortex, to the latent (mental?), as well as the rest. Thus the intra-cerebral circulation of impressions is *the* stimulus, although an indirect one, upon which force-storage in the cortex depends, and for those cortical regions which receive no direct stimulus through centripetal nerves, and no indirect stimulus through motor nerves, this intra-cerebral circulation is the only functional stimulus. When an impression is received on a ganglionic cell, its registration directly effects chemical synthesis; when an impression is liberated, its transmission indirectly does the same thing.

[1] Meynert, loc. cit., gives a diagram, illustrating this theory. It shows the conversion of a reflex movement of withdrawing the hand from a candle by which it had been burned, into a voluntary movement, determined by recollection of the burning sensation acquired on a previous occasion, and itself revived by a new sensation—the sight of the candle.

The smaller the amount of force-material stored up from the blood under the influence of the centripetal stimulus, the smaller can be the amount of work evolved in the centrifugal direction in a given unit of time. If the amount is increased, the period of its evolution is shortened—*i.e.*, the advent of unconquerable fatigue is accelerated. Conversely, when we note the speedy advent of fatigue, as in children, women, and hysterics, we must infer that the storage of force-material has been less than in cases where the period of exertion can be prolonged. The wide diffusion of the "hysterical temperament" in women is correlated with their generally lesser capacity for the storage of force, which may, nevertheless, remain within physiological limits. If the deficiency fall below these limits, it results in the altogether morbid limitations of hysteria. And, while there are many women whose capacity for force storage—as measured by their capacity for exertion—considerably transcends the average of their sex, and even reaches the masculine average, so there are not a few men whose capacity in this respect falls to the level of hysteria, and who exhibit hysterical phenomena in consequence.[1]

Significance of fatigue.

The sensory centres of the brain in hysterics are exposed to two different kinds of derangement—corresponding to two opposite phenomena—anæsthesia and pain. In the first, the registering power of the centre is so diminished as to fall below the level of consciousness; and this either by privation of blood-supply, through vaso-motor spasm, or by direct depression of protoplasmic energy to appropriate material from that. The latter case enters completely into the general theory of depressed storage-power in hysterical nerve-tissues.

Hysterical derangement of sensory brain-centres.

In the innumerable forms of hysterical hyperæsthesia, an opposite process must occur. The centripetal stimulus remaining the same, it would seem as if a larger amount of chemical syntheses were effected in the centre under its influence. When a sensory centre is subjected to an excess of stimulus—through a violent centripetal irritation—it is known that the functions of other nerve-centres may be transiently arrested or inhibited. We may ask whether the same inhibition of other centres is not liable to occur when in the centre there is an excess of reaction to a normal stimulus?

Inhibition has been explained as a phenomenon of interference between the waves of molecular movement transmitted along nerve-fibres; interference analogous to that, which, when occurring between waves of light causes darkness, and between waves of sound causes silence.[2]

Theory of inhibition.

In the nerve-tissues, if these waves of molecular movement coincide, the intensity of the movement is increased. But if one wave be retarded out of the normal rhythm, so that its crest fall within the trough of the other, this second wave will be antagonized, and the action of the nerve-centre from which it emanates will, therefore, be apparently diminished. In reality it is not the activity of the centre which is diminished, but the effect of that activity.

This is the explanation of inhibition given by Claude Bernard for the chorda tympani, by Ranvier for the vagus, by Lauder Brunton and by Wundt for the phenomenon of inhibition in general. In accord with this conception, we may suppose that when in a nerve mass, as the sensory centres of the brain, the negative work of intra-molecular synthesis and storage becomes greatly increased, the wave of movement constituting the positive work or centrifugal impulse may become retarded, and this disarrangement of normal rhythm may suffice to make it interfere

Inhibition from sensory nerves.

[1] Charcot remarks that male hysteria has become rather a topic of the day, "sujet à l'ordre du jour." He cites a thesis by Klim, containing sixty cases, and a monograph by Batault, containing two hundred and eighteen. See Gaillard's Journal, June 1886. I have seen several such cases.

[2] Brunton, Pharmacol., p. 200; Ranvier, Leçons d'anat. gen., 1877-78, p. 170. Cl. Bernard, Rapport sur le progrès de la phys., 1867, p. 67. Munk, Physiol. des Menschen, 1881.

with and antagonize the molecular waves coming from other cortical areas. These latter, therefore, would be inhibited, as an indirect consequence of the surcharge of sensory centres.

The violent centripetal irritations of sensory centres which are accompanied with pain, always tend to arrest motor and mental action. Their action is not limited to the fore-brain; the arrest of the heart's action is a well-known phenomenon of sensory inhibition. Nor is it probable that the irritation expends itself exclusively upon the sensory centres of the cortex, but is rather distributed throughout all the receiving stations of the cerebro-spinal axis. Now when, under the influence of a normal stimulus, the cortical centres have acquired the habit of registering impressions abnormally and excessively, as is shown by the patient feeling pain entirely out of proportion to the magnitude of the irritations, we must believe that the work of chemical synthesis excited in the sensory centres, is also excessive. It should, or at least may, follow that the waves of molecular movement transmitting impression in an intra-cerebral direction become retarded, and thus "interfere" with waves coming from other cortical areas. Then, though to a less degree than with violent pain of peripheric origin, the play of intracerebral associations and impulses, and their ultimate convergence upon motor (volitional) acts, will be interfered with. Hysterical "paralysis of volition" should be the necessary correlative of hysterical hyperæsthesia.

Relation between hysterical hyperæsthesia, and hysterical paralysis.

Many facts indicate that the inhibition of one nerve-centre by another is powerful in proportion as the storage of force in the first exceeds that of the second. The feeble control of the vagus centre over the heart in rabbits, the feeble control of the cortex over the subcortical motor (convulsive) centres in young children, negatively illustrates this law.

In accordance with this, the inhibition of the non-sensory cortical areas will be easy, in proportion to an habitual deficiency in the storage power inherent in their tissues. And since the active function of these areas in motility, volition, and thought, has been shown to furnish an important though indirect part of the stimulus upon which this force-storage depends, everything which diminishes such activity diminishes the power of resistance of these parts of the cortex to the inhibitory influence of sensory areas—renders the latter, if we may so express it, more and more tyrannous.[1]

It is generally admitted that activity of thought and of motion tends in some way to blunt sensation. We can most clearly represent this fact to ourselves as implying that, during such centrifugal activity, currents of molecular movement set in from the sensory centres, involving liberation of energy from them and chemical decomposition in them—thus elimination of material that had been previously stored up, perhaps in excess. In the primary reflex acts the current of impression always passes from the sensory toward the motor centre. But, as Meynert observes, in the brain, impressions can certainly traverse fibres in both directions; and as the impulse to voluntary movement does not come from the areas registering the primary sensation, but from others which have become associated with them, it is perfectly in order to suppose that the intracerebral discharge of the sensory areas is often initiated by the play of molecular movements in the mental motor regions. And this brings the argument round to its starting-point, and suggests that one way in which the sensory centres may become hyperexcitable, through excess of storage material, is through the lessened discharge of these centres when the play of centrifugal activities is defective. It is certain that the sensory centres of the cortex are capable of continuing their functions of registration almost indefinitely, even in the exaggerations of pain, while the exercise of either active thought or mobility has quite a limited duration.

Effect on sensory centres of centrifugal activities.

Hyperæsthesia from diminished mental and motor action.

The foregoing considerations indicate that the following series of conditions succeed each other in the cortex of the hysterical brain: 1. A diffused deficiency in storage power; deficiency shared more or less with other nerve-tissues, usually congenital, sometimes acquired. 2. Nevertheless, effecting of abundant storage in the sensory centres, under the permanent stimulus of centripetal impressions. 3. Deficient centrifugal activities, mental and motor, or exhaustion of mental and motor areas by exertion performed with inadequate storage material. 4. Deficient discharge of sensory centres, which continue to store material under the stimulus of centripetal impressions, but fail to decompose and eliminate this sufficiently when centrifugal movements diminish in activity. 5. Hyperexcitability of the sensitive centres, which contain an excess of force-material produced during registration of impressions, and not broken up by their transmission. 6. Tendency on the part of these surcharged sensory centres to inhibit the activities of the rest of the fore-brain.

Succession of fundamental cerebral conditions of hysteria.

The phenomenon of mental inhibition, resulting in inability for mental exertion, is extremely common in hysteria. It is often described as "causeless mental depression," as "wilful hysterical indolence," or as "brain exhaustion." I have not found the suggestion anywhere, that the depressive mental phenomena of hysteria depend upon functional inhibition of the thought-areas of the brain. Yet this view seems to me the true one, and alone consonant with all the facts of the case. I have often noticed this condition in uterine disease, where it persists until this is cured. It is not by any means always associated with pains, either in the pelvis—the then focus of irritation—or in the head. After the foregoing analysis it may be inferred that, in these cases, impressions have been generated on a diseased endometrium, or among pelvic nerves, which, though not giving rise to local pain, may, when transmitted to the sensory centres of the cortex, so overexcite them that they inhibit the remaining cortical areas.

Hysterical cerebral inhibition (cerebral neurasthenia).

The following case offers a curious form of cerebral inhibition:

CASE I.—Unmarried woman, a teacher. Subject for several years to attacks of transient amblyopia in the left eye, coming on many times a day, and lasting from a few seconds to a minute or two. These attacks had been diagnosed by two competent oculists as "epilepsy of the retina." During a year before consultation the patient was also subject to nervous attacks, in which consciousness seemed to be, not abolished, but perverted for a while. The condition is imperfectly described by the patient, who can only say that "everything seems strange," that people do not seem to be the same; that she looks very badly to them, and has an inexplicable but profound consciousness of distress. This condition may last fifteen minutes, half an hour, or longer. Examination discovered marked prolapsus of the uterus, so that the cervix came just to the introitus, and apparently rubbed upon the labiæ minoræ. There were no local symptoms of the polapsus. The uterus, which was healthy, was replaced by a cup-pessary, and the cerebral attacks immediately and permanently disappeared. The ocular attacks persisted. The entire persistence of consciousness during the attacks exclude, I should think, the diagnosis of epilepsy. These attacks seem to me to illustrate, though in a peculiar form, and on a transient and intermittent scale, the cerebral inhibition that is so common and so distressing in hysteria, perhaps especially in that of pelvic origin.

[1] According to Ebner and Munk, the sensory areas of the fore-brain are not limited to those portions of the cortex which receive the fasciculus from the "carrefure sensitive," but extend beyond these until they cover all the motor zones as well. It seems not impossible that at least many areas, even many ganglionic cells, should be regarded as sensito-motor, and this especially if the fundamental function of nerve-elements be accepted as "sensitiveness." But the facts, as at present understood, seem to indicate a frequent, though not universal, commingling of sensory and motor elements rather than an identity of these in function. The schema of sensory inhibition stated in the text must, of course, be provisional.

Such inhibition, I would suggest, is the real basis of the mental symptoms, which result, not from excess of mental exertion but from peripheric irritations in predisposed persons.

The sense of mental inability is usually attended with psychic pain, and the latter is sometimes so predominant that the former is not complained of. Psychic pain, if we accept Meynert's exposition of it, is a direct consequence of cortical inhibition.[1] Whatever interferes with the free diffusion of functional activities throughout the cortex, and with the localized hyperæmias attendant upon these, occasions the "hampered mood," which expresses itself as mental distress, or psychic pain. The immediate mechanism of this is the same, whether the cause be physical—*i.e.*, hysterical—or moral—*i.e.*, objectively justified by events. Meynert thus describes the latter form of inhibition:

Meynert's theory of psychic pain.

"The news of the death of a person who was bound up with a good portion of our thoughts, whose image would be frequently revived in our brain by the most manifold associations, and which, when presented to the brain, would arouse all sorts of secondary presentations and pleasurable emotions—such news, we repeat, would cause inhibition of all these associations, and the place of easily excited associations will be usurped by others not yet easily transmitted. Inhibition is attended by emotion and psychical pain."[2]

Vaso-motor excitation causing anæmia of brain.

According to the same author a second condition exists, which must constantly tend to increase both psychic pain and mental inability whenever cortical activity is diminished or inhibited.

Theory of cortical inhibition of vaso-motor centres.

During the functional activity of the cortex, or of any segment of it—and it is probably never active throughout its whole extent at once—the vaso-motor nerves of the arterioles going to the segment are inhibited, the blood-vessels consequently dilated, and at the same time a direct attractive force is exercised on the blood-current by the chemical processes which are quickened in the ganglionic cells. As a consequence of this combined effect, a larger current of blood is carried to the active tissue. Conversely, when the cortex ceases to be active, as in sleep, or from being itself inhibited, or under any other influence, the vaso-motor tonus of the blood-vessels is resumed, the blood-vessels contract, the cortical tissue becomes relatively deprived of blood—anæmic, or, to use Meynert's expression, dyspnœic. This condition again tends to diminish the power of functional activity in the cortical segment or segments to which the contracted arteries are distributed.

Psychic depression in grief and in hysteria.

The foregoing considerations may explain the phenomena of mental depression (inability for exertion, psychic pain) both in grief and hysteria. In the former the activity of more or less extensive areas of the cortex is directly arrested by destruction of the objects and associations which calls this into play. In the latter the same activity is inhibited by the excessive activity of the sensory areas. In both cases the diminution of functional activity in the ganglionic cells of the cortex is followed by an excess of activity in the subcortical vaso-motor centres released from cortical control. Hence, in the corresponding segments of the cortex must follow localized anæmias, which tend still further to hamper the functional activity of these segments. The greater and more unimpeded the functional activity of the cortex, the more widely diffused the attendant hyperæmias, the more intense is the consciousness of psychical well-being or happiness. The unimpeded diffusion of intracerebral impressions irresistibly suggests a correlatively facile diffusion of desire and activity over all impediments in the outside world; consciousness is permanently triumphant. In the contrary case the arrest of cerebral activities suggests as irresistibly oppression, defeat, humiliation, disaster in external events; imposes subjectively the depressing emotions of mortification, distrust, and apprehension—the depression of spirits which is unconquerable, even when the patients themselves recognize its objective groundlessness. "I have everything to live for, but I am perfectly wretched," is a common remark. "I know I am better, because I can now look at that undertaker's shop on the corner without feeling ready to burst into tears," remarked one patient to me.

This depression often reaches its maximum during pregnancy, when hysterical women often say they will "go crazy," and not infrequently commit abortion, only to rid themselves of this subjective misery.

When the personality is so completely invaded that the patient does not recognize the groundlessness of her mental suffering, the case becomes complicated by her endless misconceptions of her social relations. A (relatively mild) form of the delirium of persecution is extremely common among hysterics, even those who never exhibit the severer physical phenomena of the disease. The harmonious maintenance of social relations seems to demand the self-consciousness of an energetic and adequate personality. Cortical inhibition, which weakens this consciousness and fills it with self-distrust, almost necessarily engenders suspicion of others.

In the typical hysterical temperament egotism is a noticeable feature. In hysterics of small minds this may suffice to exclude all interest in external objects. In larger and more cultivated minds such interests are not excluded, but there is an extraordinary tendency to look at them only in their relation to the person, and only in so far as they can be made material to subserve his or her vanity and *amour-propre*. This remarkable tendency is clearly traceable to the predominance of the sensory functions of the fore-brain. Nerve-currents constantly direct attention toward the goal to which they flow. For centripetal sensory impressions this is the receiving organism; for centrifugal, it is the world upon which that organism expends its energies. Exaggeration of the sensory functions constantly tends, therefore, to exalt the consciousness of the personality over that of the external world. Activity of the voluntary functions constantly tends to divert attention from the personality to the external world. When this habit is firmly established, feelings, as well as actions, direct attention to the external world in which they originate; the individual constantly becomes more and more objective. On the other hand, the person who, in the presence of interesting or impressive events, is only preoccupied with the emotions or sensations they may have engendered in himself is distinctly marked with the hysterical stigma, even though, which is rare, no other sign of it ever appear.

Sterility in hysteria.

One curious result of the psychic aspect of hysteria is the manifold way in which it checks the development of the maternal instinct. The frequency of uterine disease in hysterics—the frequency with which their reproductive organs are imperfectly developed, the frequency of accidental abortion—entails sterility in an immense number of cases from physical causes. Where hysterical women bear children, they are usually unable to nurse them. In cases where there is no physical impediment to conception this is often purposely avoided from mere moral perversity. The patients profess to hate children, are in despair if they become pregnant, and, as already noted, not infrequently commit abortion, under the influence of the intense mental depression to which a pregnancy subjects them. When such women nevertheless have children, the hysteria, if not too profound, may be cured. But not infrequently the defect in maternal instinct persists, and the lives of the children are made wretched by the ceaseless exactions, and even increasing selfishness, of the hysterical mother—personal selfishness which is in unnatural contradiction to the profounder maternal egotism which is natural. These conditions are no more universal, or all combined in one person, than are any other symptoms of hysteria. Those women who are sterile from physical incompetence are

[1] Loc. cit., p. 193.

[2] Loc. cit., p. 103.

often tormented all their lives by the longing of unsatisfied maternal instincts. Many hysterical women do make devoted, though rarely judicious, mothers. But if not for one cause, then for another, the net result is a great diminution of complete reproductive capacity in hysterics.[1]

The bearing of children implies the liberation, on an immense scale, of centrifugal energies, mental and motor. It is the type of an action—correlating, correcting, and balancing—a feeling, emotion, and passion. From a philosophical point of view, therefore, the sterility or the deficient maternal instinct of hysterics belongs to the same class of conditions as have been already described, and in all of which there is deficiency of motor (centrifugal) force, with conservation of sensory (centripetal) function.

The physical sterility, when congenital and not acquired, allies hysteria, even when remotely, with the neuroses of degeneration. What I have termed the moral sterility, which, in one way or another, results in perversions of the maternal instinct, can be traced to the same preponderance of sensory functions, with exaltation of the narrowest nucleus of the ego, that, namely, which is constituted by the limits of the physical organism. The normal maternal instinct implies one of the first and always the most powerful enlargement of this nucleus, so as to embrace the offspring within the pale of self-consciousness. Failure of this instinct implies a most unnatural narrowing of the range of life within the sensory or purely personal sphere.

Most important, both for diagnosis and for justice, is it to recognize that the mental and moral defects which result from the conditions described are by no means always present. To many hysterics may be applied the phrase reserved by Clifford Albutt for "neurasthenics," whom he would distinguish from them,—"they are the salt of the earth."[2]

Just as marked intellectual ability, and even genius, is quite possible in hysterics,[3] so may the most amiable, unselfish, and affectionate character be not infrequently found among them. These facts simply mean that the organic tendency, though existing, has been counteracted, either by a development of cortical tissue considerable enough, and endowed with sufficiently abundant associations, to resist complete inhibition in mental spheres; or else by the educational direction given to the formation of associations, and to habits of action, which enables these to offer resistance to sensory inhibition.

Between the cases where mental depression is caused by sensory inhibition and those where it is due to the inhibition of associated ideal impressions, lie the others, where a real moral cause permanently deranges the mental mechanisms, and the affected persons become hysterical from grief or shock. These cases are in many respects analogous to cases of chorea from fright. An impression is made upon certain cortical areas so powerfully that they remain overexcited, and inhibit the activity of the rest. In chorea it is the motor regions of the cortex which are chiefly affected by the inhibition. In adult hysteria it is all of the fore-brain which is concerned in thought or volition; the convergence of intracerebral impressions upon centrifugal tracts is impeded, so that thought and volition are held in abeyance. Sometimes even portions of the sensory centres are involved in the inhibition; the patient suffers amblyopia, or localized anæsthesia of some sphere of common sensibility. More often the sensory centres remain intact amidst the depression of all the rest, and the patient becomes the victim of agonizing pains—though in the absence of any peripheric cause for pain. These are the pains of cerebral origin, which are typically hysterical.

Hysteria developed by grief.

Hysterical, *i.e.*, cerebral pains.

In suspensive or cataleptic hysteria, which is more frequently induced by moral than by other causes, the entire fore-brain has lost its susceptibility to stimuli; hence has lost its power of either storing force or of liberating energy. The complete suspension of function in these cases is only the maximum exaggeration of the condition which is fundamentally characteristic of all forms of hysteria.

In these suspensive forms of hysteria the perversion of oxidation processes is also exaggerated to a maximum. The amount of urine and of urea is greatly diminished; the latter may fall from twenty to two grammes a day.[1] The phosphoric acid is also diminished. Empereur has measured the absorption of oxygen and elimination of carbonic acid in this class of patients, and has found both greatly diminished. In one case the movement of disassimilation, as thus estimated, was twenty-four times less than normal. According to the same author, cataleptics absorb more oxygen than they eliminate carbonic acid, although both processes are greatly diminished in intensity.

Suspensive or cataleptic hysteria.

The extent of these chemical alterations indicate that the depression of function extends beyond the fore-brain, and probably involves the entire nervous system; hence affects all the nutritive processes under its control. Since the main object of the absorption of food, the circulation of albumen and its oxidation, is the maintenance of energy in the nervo-muscular system, the suspension of such energy is naturally followed by depression to the lowest point of nutritive absorptions and oxidations.

In chloro-anæmia, the peculiar neurosis of puberty, which is so closely allied to hysteria and so frequently passes into it, the characteristic alteration of the blood has been shown to be a diminution, not in the number of the blood-corpuscles, but in the hæmoglobin they contain (Gowers). There is, then, in these elements, a deficiency in the power of fixing or storing oxygen, which, demonstrated in them, may serve as an index to a similar (probable) deficiency in the elements of the nerve-tissues. Between chloro-anæmia, the mildest form of the disorder, and suspensive hysteria, the most complete and severe, stretches an uninterrupted series of morbid states.

Deficient oxygen storage in chloro-anæmia.

The existence of psychic symptoms in a case of hysteria, or in the history of the case, is admitted to establish that the fore-brain is then involved in the disease. But in the cases where these are inconspicuous, the participation of the brain is less readily seen, and still less does it appear self-evident that non-psychical symptoms are to be referred to the brain. Thus, though a few writers define hysteria as a disease of the brain,[2] there are more who call it a diffuse cerebro-spinal neurosis, or a neurosis of the vaso-motor system.

The problem should be thus stated: Given a group of sensory, motor, or vaso-motor phenomena, to decide whether these originate in disorders of the medullary or spinal nerve-centres, or whether they are due directly or indirectly to disorders of the cerebral cortex.

Hysteria a cerebral neurosis.

Now, it can be shown, I think, first, that in a large group of cases the phenomena in question either are attended by some mental symptoms, or that these have occurred in the history of the patient previous to the manifestation of the physical symptoms; second, that the characters of the "physical" symptoms themselves are explicable when referred to the brain, but not when referred, finally, to lower centres.

Distinction with medullary spinal neurosis.

It is the neuroses which present these two fundamental characters which may properly be called hysterical; and are so even when they have themselves been caused by organic disease in a thoracic or abdominal viscus, or

[1] The classical notion that sexual impulses are particularly strong in hysterics is certainly erroneous. Both physically and morally, these are often either singularly deficient or singularly perverted, the latter trait constituting one of the first links with insanity. The peculiar whims in these respects of hysterical women often add to their tendencies to sterility by leading them to avoid marriage. Molière has drawn a truthful picture of the refined hysteric in Les Precieuses.

[2] Visceral Neuroses.

[3] Madame de Staël indulged in the most violent outbursts of hysterical emotion; Charlotte Bronte suffered from prolonged hysterical hypochondria, probably due to endometritis; George Eliot was the victim of hysterical headaches, and probably of other forms of the disease.

[1] Fabre: De l'Hysterie Viscerale.

[2] Jolly: Ziemssen's Handbook, art. Hysteria.

are associated with organic disease of the nerve-centres themselves.

Neuroses which really originate in medullary-spinal centres, though often presenting symptoms which resemble those of hysteria, and sometimes occurring independent of hysteria in persons of hysterical constitution, require to be carefully distinguished from the hysterical neurosis itself.

Analysis of the non-psychical symptoms of hysteria.

The principal non-psychical phenomena of hysteria are, in the motor sphere, paralysis and convulsion; in the sensory sphere, anæsthesia and pain; in the visceral sphere, numerous derangements, traceable to vaso-motor spasm or the spasmodic contraction of unstriped muscular fibre.

That hysterical paralysis is an affection of the cortical motor centres is generally conceded, chiefly on account of the marked influence often seen to be exercised over it by mental impressions. But this is also indicated by the (frequently) monoplegic character of the paralysis, and by the preservation of nutrition and Faradic contractility in the affected muscles. The second character, identical with that of organic cerebral paralysis, excludes the ganglionic centres of the spinal cord, and establishes the cerebral origin of the disease. The monoplegic form of paralysis is as characteristic for the cortex in functional derangement as in organic lesion.

Such functional cortical paralysis represents the maximum degree of inhibition of the cortical motor areas—of which some degree exists in the majority of all cases of hysteria. When the paralysis involves the nerves of the lower extremity, and utero-ovarian disease coincides, the paralysis is often called reflex, and supposed to be in some way connected with reflex spinal arcs.[1]

First motor disorder, or paralysis.

But, first, there is no physiological experiment which exhibits paralysis resulting from irritation[2] of the sensory part of a reflex arc, but only excess of muscular contraction—spasm.

Second, cases of paralysis without pelvic symptoms, or ascertainable lesion, entirely resemble those in which these coexist.

Third, paralyses of distant nerves—as of the laryngeal, or paresis of the nerves of the throat—are very common substitutes for paraplegic paralysis, and certainly lie beyond the pelvic reflex arcs.

The following cases are illustrations:

Case II.[3]—Intensely chloro-anæmic girl of twenty-two. Ovarian hyperæsthesia for a year, without tangible lesion of uterus or ovaries. Then suddenly, incomplete paraplegia lasting twenty-four hours. Recovery; relapse a few weeks later. Paraplegia remained incomplete for several months. Patient began to suffer from severe dysmenorrhœa; pelvic pains gradually encroaching on intermenstrual period, until life was rendered perfectly wretched by them. Ovary found prolapsed. Paraplegia became so complete that patient could not move toes, and remained so for seven years. Then oöphorectomy was performed by Dr. Mundé for relief of dysmenorrhœa; and with no hope of affecting paralysis. In ten days after the operation, patient could move the toes; in a month, had quite recovered power of walking. Ovaries, to naked eye, said to have been healthy.

Case III.—Girl engaged in factory work. Incomplete paraplegia, with fixed right ovarian hyperæsthesia; no dysmenorrhœa; uterus retroverted; otherwise healthy. Permanent replacement of uterus had no effect; galvanism at times entirely restored power of walking; this again lost.

Case IV.[1]—This case was diagnosed as true locomotor ataxia in several hospitals, but the ataxic symptoms entirely disappeared after an operation for laceration of the cervix.

Case V.—Married woman, aged forty. Subject for many years to altercations with husband; loss of power of walking—*i.e.*, experienced so much pain in walking that she considered herself unable to walk, and took to bed for two years. No uterine disease at all. Recovery rapid after positive diagnosis of hysterical nature of "paralysis."

Case VI.—Woman, aged thirty-five. Subject for five years to uterine hemorrhages, associated for a year or two with intermittent aphonia. Uterine fibroid sessile in fundus. Removal; arrest of hemorrhages, but attacks of aphonia continued to recur for a long time.

These cases, varying superficially, resemble each other in the preservation of nutrition and Faradic contractility; indeed, in the absence of all objective symptoms, and the summing up of the disease in the single condition—inability of the will to determine the contraction of certain muscles. To what could this be due but to depression, or inhibition of the functions of the cortical motor centres in liberating energy in motor tracts in response to intracerebral stimulus? In Case IV. alone did the inhibition of the cortical centres seem to be associated with peripheric irritation, for in Case II. the ovaries were reported as normal, and the operation seems to have been successful through removing the stimuli of the menstrual processes from hyperexcitable sensory centres. The sensations of fatigue, of which hysterics complain so much and so bitterly, often represent a minor degree of inhibition of cortical motor centres. It makes no difference how perfectly may be accomplished nervo-muscular functions through the body, if the only conscious spectator of these—the fore-brain—registers them awry.

Hysterical fatigue a minor degree of hysterical paralysis.

When the patient is anæmic or cachectic, there is certainly often reason to suppose that the reparative nutrition of the entire nervo-muscular system is impaired. But this is not the case in really hysterical fatigue, which, though just as real to the consciousness of the patient, may coincide with every sign of excellent general nutrition. The intimate process of the phenomenon of fatigue is to-day supposed to be the accumulation within nerve- or muscle-tissues of the waste chemical products of previous exertion. The elimination of these acid excretæ is often interfered with in lithæmia, from the diminished alkalinity of the blood bathing the cells, and into which the acid substances should osmose largely in proportion to that alkalinity.[2] Hence the frequent muscular pains, aching, and weariness; and, when the condition extends to the fore-brain, the frequent clinical combination of lithæmia and hysteria. High tension in veins and in capillaries must also interfere with exosmosis from cells; hence the low arterial tension of anæmia, which constantly tends to increase venous tension, interferes with the elimination of waste, and tends to prolong fatigue, as frequently happens in anæmic hysteria. But in the brain exist special mechanisms for the removal of waste, which are correlated with the special necessity for prompt and complete removal. And that it is this mechanism which is principally deranged in the fatigue of hysteria is shown, I think, by the peculiarities of sleep in hysterical persons, and their habitual increase of fatigue immediately after the period which should, normally, restore them. The fatigue-products of the brain, if not of all nervo-muscular tissues, are principally eliminated during sleep. This is the reason that the morning urine contains, as Mendel demonstrated, larger amounts of phosphoric acid than that formed during the day. During sleep, both the breaking down of waste products into their elements and the elimination of these from nerve-tissue occur more extensively. Among nerve-tissues it should be principally those of the fore-brain

Fundamental condition of fatigue.

[1] Brown-Séquard assumed a vaso-motor spasm in the motor ganglia of the cord, dependent on sensory irritation. Leyden has attacked the vaso-motor reflex theory, substituting that of an ascending neuritis, on the testimony of two cases, with autopsies.

[2] Brown-Séquard's experiments consisted in hemi-sections of the cord, which were followed by hyperæsthesia of the same side due to vaso-motor paralysis.

[3] The termination of this case was observed and reported by Dr. Mundé in the New England Medical Monthly.

[1] Reported by me in the Archives of Medicine as hysterical locomotor ataxia.

[2] See Ranke: Lebens bedingungen der Nerven.

which is thus refreshed by sleep, since its activity is much the most completely suspended. Now, it is quite characteristic of persons in whom hysteria exists, or is imminent, that they wake in the morning with a sense of physical fatigue, or of mental depression or irritability. Schopenhauer thinks it is one among many proofs of the theory of pessimism, that the happiest moment of the happiest life is that of falling asleep, and the unhappiest moment of unhappiness is that of first awakening. This is true when legitimate causes for mental depression exist, and is also true when their influence is simulated in hysteria.

In the nervous system, and especially in the brain, the waste products do not pass directly into capillaries, but into the lymphatic sheaths surrounding the arteries. The circulation of the lymph-current, and its passage from the perivascular to the subarachnoid spaces, is regulated by the pulsations of the brain, or its variations in volume, by which the lymph-spaces are rhythmically compressed. The brain-pulsation is composed of three factors: the arterial pulse-wave, the respiratory wave, and the vascular wave. The respiratory wave results from the aspiration of venous blood from the brain during inspiration, and the obstruction to its flow in expiration. The vascular wave advances like a peristaltic movement, and consists in rhythmic dilatations and contractions of the arterioles, apart from the cardiac pulse, and dependent on intermittent vaso-motor influences. This vascular wave is said by Burckhardt[1] to be much more regular during sleep than in the waking period, and constitutes, according to this observer, the principal motor mechanism for removing waste products through the lymphatic products. It is said to give two to six tracings a minute. Its lowest point (I am now quoting from Meynert's citations) corresponds to the contraction, its elevation to the relaxation of the arteries. When the wave begins as systole in the arteries at the base of the brain, this is constricted, and the brain mass at the same time pushed upward with the advancing column of blood; simultaneously, the arteries of the convexity dilate in diastole and receive the blood; the cerebral hemispheres swell, and, being compressed against the rigid skull, compress the roof of the ventricles and compel one portion of the ventricular fluid to escape by the foramen of Magendie, another portion to flow into the veins of the choroid plexus. In the second stage the arteries of the convexity are in systole, those of the base in diastole, causing swelling of the base, which opposes the return into the ventricles of the fluid which has escaped into the subarachnoid spaces, so that this fluid passes over the convexity of the brain, between it and the skull, and enters the great nervous sinuses.

Removal of waste products from the brain.

If it be true, as is now asserted, that this vascular wave is of more importance in the lymph-circulation in the brain than either the pulse- or respiratory-wave, it is clear that any disorder of the vaso-motor centres which govern it may greatly disturb the removal of waste products by interfering with the normal development of such a wave. If, for example, the normal intermittence of vaso-motor impulses becomes exchanged for a permanent tonus, the diastolic portion of the wave would disappear, and with it the swelling of the hemispheres by which the ventricles are compressed. There would remain the variations in volume due to the cardiac systole and diastole; but in sleep these are reduced to a minimum. Hence in any persons subjected to abnormal vaso-motor irritations must exist an imperfect removal of waste products from the brain during sleep, and therefore imperfect refreshment by the great restorer.

Interference with refreshment brain by vaso-motor spasm.

Apart from the foregoing conditions, we may inquire whether the diminution of oxygen absorbed during sleep—diminution which amounts to twenty-four per cent. of that of the waking hours'—is not liable in hysterics to interfere with the oxidation of waste products, and hence with their reduction to the most soluble form. The normal diminution corresponds, of course, to the diminished demand for oxygen force-compounds, which are evidently formed in smaller quantities at night. But the other destiny of oxygen in the nervous tissues is the complete reduction of chemical substances, whose first decomposition was attended by the liberation of energy. Where the habitual supply of oxygen is very near the margin, the diminution during sleep may easily reduce it below the amount at which prompt and effective oxidations are possible. Hence, by a double mechanism, the sleep of the neurotic is liable to be uncertain and unrefreshing; to be tormented by bad dreams, among which are most characteristic those of falling a height. The restlessness and bad sleep closely imitate that of fevers, where the nerve-tissues are surcharged with their own poisonous excreta.

The curious researches of Anjel[2] on the peripheric blood-flow during brain-activity offer experimental indication of vaso-motor irritation in the brain. In normal persons, during mental activity, the turgescence of the tissues of a limb enclosed in a plethysmograph is found to diminish—presumably from the afflux of blood to the brain.[3] But in neuræsthenics, under the same circumstances, the plethysmograph registered no change. The author infers that from permanent and abnormal excess of tonus in the blood-vessels of the brain the alterations in its blood-supply are less marked, and especially that less abundance of blood is thrown into the brain during its functional activity. Hence more ready exhaustion by this.

Experiments showing vaso-motor irritation brain.

The motor derangement of hysteria opposite to paralysis and fatigue is convulsion. The co-ordinate character of hysterical convulsion distinctly marks it as cerebral, as effected in the highest reflex —*i.e.*, the co-ordinating—centres, formed by the subcortical basal ganglia of the brain. Thus, while sharing the cerebral origin of other hysterical phenomena, it does not imply a condition of exalted activity of the cortical motor centres, which would contradict the general theory of their condition we have been trying to establish. On the contrary, the excessive excitability and activity of the subcortical motor centres imply diminished control over these by the cortical centres, which normally inhibit them in part. It is well known that hysterical convulsions are often brought on by painful, or even by simply disagreeable, moral impressions.

Second motor disorder of hysteria, or convulsion.

The following case is all the more worthy of citation because illustrating hysteria in the male subject:

Case VII.—Man, aged sixty. Long subject to attacks of co-ordinated convulsions, diagnosed as hysterical by several American and European physicians. On one occasion, trifling altercation at table with an old lady; patient withdrew to his room in great offence; and two hours later was seized with severe attack of typical convulsion; the body curved in opisthotonus, then bounding from the bed in clonic spasms, these alternating with fits of sobbing and tears. Consciousness was evidently preserved throughout.

Painful emotion, it has been said, implies inhibition of cortical activities. The inhibited cortical areas lose their own power of inhibition over the subcortical sensory-motor ganglia. If the total cortical area thus inhibited be large, the negative excitation of these ganglia may be so great that involuntary but co-ordinated muscular contractions ensue (hysterical convulsion).

The tendency to cortical inhibition should be resisted in proportion to the mass of secondary impressions which have been previously organized—in virtue of the chemical synthesis attending their registration—in cortical areas. This theoretical statement agrees perfectly with the ob-

[1] Ueber Gehirnbewegungen, Mitth. d. Naturf. Gesellsch. in Bern, 1881.

[1] Voit, Hermann's Handbuch, Bd. 6, i., p. 205.
[2] Archiv für Psychiat., 1884.
[3] Amidon's experiments on localized rise of temperature in the brain during voluntary motor contractions point also to localized cerebral hyperæmias. See Alumni Prize Essay, College Physicians and Surgeons, 1880, Arch. Med. for April.

servation of common experience, that the liability to hysterical convulsion varies in inverse proportion to the mass of ideas previously organized in the consciousness of the individual. If this be small, a slight degree of annoyance suffices for the convulsion; but in the contrary case the phenomenon, when of mental causation, only appears after prolonged and profound disturbance. It is curious to notice, however, that hysterical convulsion much more often appears after slight than after severe moral causes; the latter seem to arouse impressions that re-enforce resistance to inhibition.

Finally, the convulsion may be spontaneous. Yet, of all hysterical accidents, I think this is most frequently traceable to the immediate influence of moral events; also, is the most often limited to persons of narrow intelligence. The post-epileptic hysterical phenomena noted by Gowers[1] are not infrequently convulsive. They are considered by this author to mark the advent of a slight degree of brain-degeneration; *i.e.*, such impairment of cortical power as diminishes cortical inhibition over subcortical ganglionic centres.

Third motor symptom, contracture.

A third form of disorder in the motor sphere is, like paralysis and convulsion, common both to hysteria and to organic brain disease—this is contraction or rigidity of muscles. In organic disease this follows upon paralysis caused by lesion of the pyramidal tract. In hysteria the contraction is not necessarily preceded by paralysis, and this circumstance is often the only means of establishing the diagnosis. In organic disease, muscular rigidity is known to be associated with sclerosis of the lateral columns of the cord, or, more specifically, with descending degenerations of the pyramidal tracts. Correlatively with this discovery, hysterical contraction has also been assigned to these tracts. Charcot has even discovered lateral sclerosis in an old woman who was said to have suffered for many years before death from hysterical contraction.

The primary condition in descending sclerosis is the atrophy of the medullary sheaths of nerve-fibres which have been separated from their trophic centres in the brain. Trophic centres are evidently those from which start nerve-currents. The reason why the fibres of the pyramidal tract degenerate after a hemorrhage into the internal capsule is, admittedly, because the passage of nerve-currents through them is interrupted. The same degeneration is observed after lesions of the central convolutions, when, though all the mechanisms of movement remain intact, the mechanisms for conveying voluntary impulses have been destroyed.

Is it not possible that, if these mechanisms be, not structurally, but functionally impaired, as they are in hysteria,[2] and the passage of nerve-currents from voluntary impulses suspended, the nutrition of the centrifugal tracts may suffer in some manner analogous to that by which the medullary sheaths waste in organic hemiplegia, but much less intense. Thence, as a consequence, the rigidity of the muscles connected with these tracts.

Such a sequence cannot be considered inevitable, for there are many cases of hysterical paralysis without contraction, and many cases of contraction where the inability to move the limb begins at the same time with its rigidity. But it is difficult to see how the line of causation can be in any other direction than that indicated.

Anæsthesia, the first great division of sensory hysterical phenomena, can be interpreted in one of two ways.

Sensory hysterical phenomena: First, anæsthesia.

It implies such defective blood-supply to the cortical receiving centres that they are unable to obtain material for the chemical syntheses of registration, though constantly receiving the stimulus of centripetal impressions. The anæsthesia would then be attributable to vaso-motor spasm.

But it is probable that the nerve-elements of the sensory centres may also suffer direct depression of their power to respond to stimulus—depression analogous to that suffered by the motor centres in paralysis. In both cases the depression simply exaggerates the habitual defect in the power of force-storage. Anæsthesia, like catalepsy, belongs to the graver forms of hysteria. The stimulus to sensory registration is so great and so permanent that in sensory centres the defect is habitually overcome, even when obvious in others. When these also fail it is evident that the defect is unusually great.

Amblyopia is the most serious form of anæsthesia. The following case illustrates the serious difficulty in diagnosis which this symptom may occasion:

Case VIII.—Unmarried woman. Sufferer from various forms of neurotic disorder for several years. After a period of several months of unusually good health, seized suddenly with the most violent pain in eyes, occipital headache, vomiting, and amblyopia, which in a day or two increased considerably, but never to total blindness. The pupils were widely dilated and insensible to light. For two days there was rigidity of the neck and some retraction of the head. Pulse and temperature remained normal; consciousness was unaffected. No ophthalmoscopic examination at the time; a diagnosis was made of a basilar meningitis localized around the optic chiasma. The patient, however, began to recover in a week, but remained subject to violent headaches, as indeed before the attack. Some years later this patient had an attack of incoercible anorexia and vomiting, which terminated fatally in ten weeks. At the autopsy the brain, medulla, and cord were carefully and microscopically examined, and not the slightest trace of organic lesion found. The vomiting, though fatal, had evidently been hysterical, the disturbance in the nerve-centres functional.[1]

This termination made it strongly probable that the cerebral accidents of the preceding years, including the amblyopia, had been also functional, hysterical, developed under the same influence—a neuritis of the median nerve, as seemed to be chargeable with the final and fatal irritations.

In minor forms of hysteria, disturbance of the visual sphere not leading to amblyopia is extremely common. Much of this is due to spasm of accommodation, with spasm of the internal recti muscles, or else to paresis of the same muscles. These disorders will be presently considered.

Of all hysterical disorders, pain is the most frequent, the most distressing, and often the most perplexing, either for diagnosis or treatment. The important characters of hysterical pains are the following: They predominate on the left side of the body; they are entirely out of proportion to the peripheric irritation in which they seem to originate, both in intensity and duration; they are capable of surviving the complete subsidence of peripheric irritation; they may exist in the absence of all ascertainable peripheric irritation; they often develop and cease, like other hysteric symptoms, under the influence of moral impressions; they are constantly liable to diffuse from the locality in which they first appeared into others, not adjacent, but often connected with the first by ramifications of the same nerve-plexus. The diffusion, however, easily exceeds these limits, and often is general. At other times, however, pain may remain with the utmost tenacity, limited to a single spot or nerve-trunk for years.[2]

Second sensory disorder, pain.

Spots of hyperæsthesia are usually aggravated by pressure; deeper-seated pain is sometimes relieved by it; thus especially in the head, and when seated in the muscles of the back.

The reactions of hysterical pain to electricity are also

[1] Epilepsy.

[2] By direct cessation of function or by inhibition.

[1] An organic cause for this disturbance existed in the periphery of the nervous system, in a neuritis of the median nerve. The terminal history of this case has just been reported by Dr. R. Osgood Mason, Am. Journ. Med. Sciences, July, 1886.

[2] Charcot has recently pointed out the error of considering hysterical phenomena to be necessarily fugacious and mobile.

variable, although, as a rule, galvanism has a surprising effect in dissipating these pains.

CASE IX.—Complains of fixed pain in track of last dorsal and ilio-hypogastric nerve, and in iliac branch of the latter. This locality is a frequent seat of hysterical pain, with or without distinct ovarian hyperæsthesia, with which the ilio-hypogastric pain is frequently associated. The application of a galvanic current of fifteen milliampères, descending from the spinal cord along the nerves, invariably relieved the pain in ten minutes. After half a dozen applications the patient professed herself entirely cured, for the time at least, though the pain had previously persisted with more or less intensity for a year.

CASE X.—Married woman, thirty-five years of age. Markedly hysterical temperament, in the form of emotional excitability. Symptoms developed after a winter passed in nursing a relative, and suffering with much physical fatigue, and also anxiety. There was uterine catarrh of moderate severity; hyperæsthesia, without hyperæmia of fundal endometrium; left ovarian hyperæsthesia marked; ovary not perceptible. No dysmenorrhœa, but subject to violent "bursting" headaches just before menstruation, immediately relieved by flow. During premenstrual week, invariably severe mental depression.

In addition to the headaches and the fixed pain in the ovarian region, the patient suffered from pain in the cutaneous branch of the second lumbar nerve where it passes over the left hip, in the middle gluteal nerve on the same side, and in the left pudic nerve. All these pains, as well as ordinary headache, could invariably be dissipated for several hours, or even days, by galvanism applied with the polar method. There seemed to be no difference between the effect of the two poles. The method was not tried on the premenstrual headache.

This patient was subjected to a certain amount of intra-uterine treatment, which was always very perturbating. The patient certainly derived no immediate benefit from this, though immediately after its cessation, and on going into the country, she became quite well. The galvanism, however, retained a permanently beneficial influence, whose duration constantly increased. My present impression is that this treatment would have sufficed, with time, to cure her; but while under my treatment she at one time consulted a prominent gynecologist, who diagnosed endometritis and ovaritis, and advised a six-weeks' residence in his hospital. This advice was not followed, but it was about six weeks later that all symptoms disappeared.

CASE XI.—In this case, a girl of naturally hysterical temperament, developed the most marked hysterical symptoms in connection with a retroversio uteri, some of which persisted, though much relieved, after the position of the uterus had been rectified. Among these appeared a new symptom—pain in a fixed part of the vagina, apparently in a branch of the pudic nerve. This pain caused, for a long time, endless trouble about the pessary, which, however, had evidently nothing to do with it; and was so much aggravated by walking that the patient scarcely took any exercise. The pain was aggravated by galvanism, but yielded to a few applications of iodine, made while the patient was being much benefited from the health-lift.

CASE XII.—A robust young German woman, twenty-eight years of age, consulted for violent pains, which occupied nearly all the branches of the left lumbar plexus, accompanied by ovarian hyperæsthesia, and which had lasted a year. These pains would be subdued during the application of a strong galvanic current, but would return in from five to ten minutes afterward. There was no ascertainable utero-ovarian disease. Hysterical symptoms during the year the patient was under observation, but no history of these could be obtained at first. At the end of a year the patient was in the same condition, and disappeared from observation.

CASE XIII.—Young lady, thirty-two years of age. Lithæmic family history; some relatives with marked hysterical hypochondriasis. Patient herself had had several attacks of hysterical affections of different kinds, now consulted for a spot of pain in left ovarian region of abdomen, that, at first thought, might have been associated with uterine or ovarian lesion, but which soon showed itself as pure ovarian hyperæsthesia. This pain was relieved by galvanism, but more so and more permanently by Faradism, applied externally, and disappeared after a few applications, though it had lasted six months.

CASE XIV.—Young woman, about thirty years of age. Marked and peculiar hysterical egotism; complained of a pain in track of right twelfth intercostal nerve, said to have lasted seven years. Said to have been aggravated by exercise taken under advice of physician. This pain was quite unaffected by electricity.

CASE XV.—Unmarried girl, twenty-seven years of age. Pain in left crural nerve of eighteen months' duration, during a year of which patient had not walked at all. Either galvanism or faradism temporarily relieved pain, but did not cure it. Patient subsequently cured by sojourn at Weir Mitchell's hospital, where faradism was applied to every part of the body except the affected nerve.

CASE XVI.—Very delicate girl of nineteen years of age. Two years previously severe chloro-anæmia, with amenorrhœa of six months' duration. Recovery. Then severe moral strain through illness and death of father. Patient profoundly prostrated in strength, though making every exertion; constant fatigue, anorexia, much insomnia, nervous fever, headache constant, with frequent exacerbations. Tonics, given at first by another physician, produced no effect. Headache finally greatly improved by mild galvanic current, nape to forehead, and with labile passes here. Relief persisted for twenty-four hours, and was especially marked to the distress which had existed at the nape of the neck.

CASE XVII.—Markedly hysterical constitution, though of an active and cultivated intelligence and most affectionate disposition. Ovarian hyperæsthesia developed, together with a retroversion of the uterus, immediately upon an arrest to menstruation through a moral shock received while menstruating. Amenorrhœa persisted for a year; then menstruation returned, but was often accompanied by hemorrhage from the rectum. The ovarian hyperæsthesia persisted for three years more, causing almost entire inability to walk. During this period, however, it was always relieved, and seemed gradually to abate and disappear, under the daily application, externally, of faradic electricity.

CASE XVIII.—Unmarried woman, thirty-eight years of age. Many hysterical symptoms. Pain in right knee, developed after slight sprain, and persisting for several weeks. Readily dissipated by a very mild application of galvanism; polar method, anode. Some return of pain cured in same way, as rapid and more permanent cure effected by arsenic.

The following case illustrates the development of pains by moral impressions, in a way that is all the more interesting from the age and sincerity of the patient:

CASE XIX.—Woman, fifty-six years of age. Neurotic symptoms of many kinds for many years. A month after death of husband, to whom she was much attached, and whom she had nursed through a trying illness, patient began to have the most agonizing pains darting all over the body. The pains had lasted a fortnight when I saw the patient. They rapidly yielded to bromide and valerian, though for some weeks showed a constant tendency to return.

The same line of reasoning which, as I think, establishes the cerebral nature of hysterical paralysis, anæsthesia, and contraction,[1] should assign the far more frequent phenomenon of hysterical pain also to the cerebral sensory centres. "The impressions of the [entire] body are conveyed to the brain by the ramifications of all the nerves and their terminal or-

Cerebral origin of hysterical pain.

[1] The cerebral nature of hysterical convulsion is not, I think, called in question.

gans; *mutatio mutandis* we may argue that the cerebral cortex is the surface upon which the entire body is projected by means of these nerves."[1] No sensory impression can rise into consciousness until it has been thus projected upon the cortex; conversely, the sensory impressions that exist in consciousness, without any objective justification, can only arise in the cortex. The sensory hallucinations of insanity sufficiently prove that the cortical terminations of sensory nerves, in this case most notably those of special sense, are capable of generating impressions which are referred to the periphery. The pains of pure hysteria can only be hallucinations analogous to those of insanity, and generated in the sensory centres of the cortex. For where else could they be generated?

As in insanity slight lesions of the auditory apparatus may initiate hallucinations of hearing which suffice for a basis to a delirium of persecution, so in hysteria slight, and even physiological, impressions may suffice to initiate hallucinations of pain in morbid sensory centres. The brain-cortex is the only part of the nervous system which possesses the power of immeasurably magnifying an impression, in a way that we can perhaps rudely represent by the action of the galvanometer or the boussole. This magnifying power, and still more the capacity for generating a hallucination of pain in the absence of all irritation, is often clinically interpreted as the "imagination" and "exaggeration" of hysterics. These expressions, which, properly understood, really place the pain on the most profound morbid basis, by referring it to disordered action of the brain, are, singularly enough, often taken to justify a contemptuous dismissal of the whole subject. But what can be more serious than a fact of consciousness which has been produced by illicit means?

The remarkable diffusion of hysterical pains is often interpreted as indicating diminution of resistance in the spinal cord, with consequent irradiation in it of centripetal impressions. But irradiation in the cord does not lead to diffusion of sensation, but to wider response in reflex movement. This is shown in Pflüger's experiment, and probably also in strychnine-poisoning.

On the other hand, a moderate degree of diffusion of impression through the receiving-centres of the brain would cause the excitation of areas belonging to centripetal nerves which terminate on the periphery at some distance from the one originally irritated. The course of centripetal nerve-fibres may be compared to a sheaf, expanding at both ends and compressed in the middle. The separation of the central terminations of nerve-fibres at the cortex corresponds to the much wider separation of the same fibres at the periphery.

By a diffusion of the irritation from a single focus may be excited any or all of the pains so characteristic of hysteria—the clavus, inframammary, third intercostal, præcordial, epigastric, infrascapular pains; those in the track of the external branches of the lumbar and sacral plexus, the pain over the crest of the ilium, and, possibly, the ovarian hyperæsthesia.

The frequency with which pain is referred to the regions of the lumbar and sacral plexus, even in the absence of any utero-ovarian disease, may be explained, at least in part, by the masses of impressions which are being continually generated at the peripheric expansion of the utero-ovarian nerve during the rhythmic processes of menstruation. The frequency of slight disorders of these processes increases the probability of morbidly affecting the cerebral sensory centres through their medium. But, as will presently be shown, vaso-motor spasm probably plays an important *rôle* in the sensory symptoms referred to the pelvis, notably in the ovarian hyperæsthesia.

Pain in the track of the occipital and trigeminal nerves, the basis of some of the most violent headaches observed in neurotics, is often difficult to interpret. Are these true neuralgias, irritations of the roots of nerves by obscure nutritive changes in their nuclei of origin? It is well known that Anstie explains neuralgic pain by atrophy of the posterior nerve-roots—minor degree of the lesion which causes the pains of tabes dorsalis.

Explanations of true neuralgic pain.

The old and oft-quoted remark of Romberg, that "pain is the cry of the nerve for healthy blood," has led almost to a habit of referring these and other neuralgias to anæmia. They are certainly often associated with lithæmia. Apart from general conditions interfering with the abundance or the purity of the blood-supply, the medullary and upper cervical nerves are especially exposed to localized anæmias during irritations of the medullary vaso-motor centre. Such irritations are most frequent in hysteria.

But all the foregoing causes produce pain directly; a real change takes place in the sensory roots, or the nuclei of origin of the nerves, which is simply registered by their cortical fibres in the sensory regions of the cortex. When due to vaso-motor spasms, these neuralgias may be indirectly due to hysteria. In other cases they may be simply associated with hysteria. Finally, though there be at present no absolute proof of such an occurrence, there seems no reason why sensory irritations should not diffuse into the cortical areas of the trigeminal and occipital as into those of other nerves, and thus pain be referred to their distribution even when both their peripheric expansion and nuclei of origin were intact.

Pain in the head—headache—can never be the direct expression of irritations of the cerebral sensory centres, for such irritations are always referred to the periphery of the nerves connected with these centres. The location of pain in the head after cerebral irritation implies that irritation has been referred to the ramifications of the trigeminal nerve in the dura mater, or to the branches of the occipital nerve distributed over the scalp.

This pain may originate in several ways. In the first place, typical hallucinations of pain may be generated in the cortical centres for the dura mater nerves, and referred to their periphery, as in hysterical pelvic pains.[1] In the second place, hysterical vaso-motor irritations, generated through lack of cortical control over vaso-motor centres, may cause spasmodic anæmia of the nuclei or spinal roots of these nerves, or diffused neuro-paralytic congestions of the dura mater. Finally, true neuralgias of these nerves from general anæmia, or from lithæmia, may develop in hysterical persons, and associate themselves with typically hysterical symptoms.

Case XXII.—Amenorrhœa and severe headache, almost incessant for two or three years. Frequent paroxysms of neuralgiform pain in nape of neck, and extending forward in track of superficial cervical plexus. These paroxysms always relieved and finally cured by aconitia, which had no effect on the headache at all.

Hemicrania has long been regarded as a vaso-motor neurosis; as such it is sometimes hysterical, sometimes direct, especially from the blood-poisoning of lithæmic indigestion. A number of distressing paræsthesias in the head are most common in hysteria and in uterine disease—the head is too big; is empty, hollow; is burning, etc. Vertical and occipital headache is most characteristic of uterine disease, and of uterine hysteria. A constant, diffused, dull headache is also frequent, and would be best explained by diffused congestion of the dura mater through vaso-motor paresis.

(To be continued.)

Artificial Tape-worms.—A writer in the *Southern California Practitioner* says that the people from the country around Los Angeles go to that city for treatment for tape-worm, and return with yards of tænia in bottles. The worms, he admits, are very pretty and perhaps worth all they cost, for they are made of celluloid.

[1] Meynert, loc. cit., p. 39.

[1] See Fox (Diseases, Sympathetic, chap. on Hysteria) for analysis of the action of the otic ganglion upon the sensitive nerves of dura mater.

ADVANCEMENT OF TENON'S CAPSULE.

By J. HERBERT CLAIBORNE, Jr., M.D.,
NEW YORK.

FIVE years ago De Wecker proposed and performed advancement of Tenon's capsule. Having seen the operation performed a number of times by him and others, with good result, I became imbued with a desire to test its advantages myself. I have performed the operation twice in the case below cited, and am induced to publish the results, not from the conclusions which can be drawn from so limited an experience, but from a desire that the steps of the operation may be definitely described, and that others may be led to perform it and to give us the benefit of their observations. Before the American Ophthalmological Society, convened at New London during July, Dr. Knapp cursorily described the operation and gave the results of advancement of Tenon's capsule in ten cases. His impression as to the usefulness of the operation was favorable.

The case upon which I operated was that of a boy, aged twelve, who had squinted with the right eye from early childhood. There was a convergent concomitant squint of at least three lines and a half.

He squinted with the left eye only under cover of the hand, and the parents stated that they had never seen him squint with this eye. Under cocaine, tenotomy of the internal rectus was performed "extra conjunctiva." In order to prevent sinking of the caruncle, a double suture was passed through the conjunctiva, two lines to the outer side of the caruncle, the needle cut off, each end threaded separately, and one passed through the upper and the other through the lower limit of the corneal lip of the wound. The sutures were then tied so as just to bring the lips of the wound together.

Immediately after the operation the correction was perfect, but when the boy returned, on the third day, there was a squint of at least one and a half line left.

Four or five days after the tenotomy, advancement of the capsule of Tenon over the external rectus of the same eye was performed under cocaine. The conjunctiva was picked up and a vertical wound made with the scissors two or three lines from the corneal margin; the conjunctiva was then freely dissected up as far outward as the outer canthus, and upward and inward above, and downward and inward below the cornea, to a distance corresponding to one-third of its diameter.

The wound in the conjunctiva was then enlarged, a triangular flap (with base outward) dissected up and cut off. The width of this flap at its base was at least four lines, the length, from apex to base, at least five.

The capsule of Tenon was then picked up at the upper and outer, and lower and outer angle of the wound, and a free incision made into it at each point.

Sutures were then passed under the conjunctiva, above and below the cornea, carried into the sac of the capsule, and brought out through the conjunctiva as far outward as possible. The patient was directed to look in the direction of the effect desired, namely, outward, and the sutures were tied tight. While the patient was yet on the table, the squint had entirely disappeared; when he alighted, however, the correction was very slight indeed. He now squinted with the other eye also, to the extent of at least two lines.

This condition was not altered in five days. Advancement of the capsule was then done over the external rectus of the left eye. The method of procedure was the same. As to the effect, the same was observed as in the other eye; correction was complete while the patient was lying on the table, but was almost *nil* after he alighted.

When he returned, on the third day, it was observed that the upper suture had slipped; the lower one, however, still held firmly; correction was more pronounced, but by no means complete.

The squint in the right eye still remained. From the first operation to the last, instillations of a three per cent. solution of atropine were made into each eye every third day.

There was considerable, though no alarming, reaction each time, and the boy complained of pain during the night following each advancement. The manifest hypermetropia had been found to be $\frac{1}{40}$, the total $\frac{1}{35}$; after the effect of the atropine had worn off, he accepted $+\frac{1}{36}$ for both eyes. This glass was immediately prescribed. After three days' use of them, the eyes were noticeably straighter, and they continued to become straighter, till at the present date, four weeks since the last operation, there is perfect parallelism, with and without glasses, for distance, and only the faintest squint in the left eye in fixing objects at eight or ten inches. There is still considerable redness and injection over the seat of each advancement. The cicatrices are perpendicular and well marked.

As far as my recollection goes, the operation is described above as it is performed by De Wecker.

Dr. Knapp loosens the connections between the capsule and the muscle with the hook, and in addition adds a third central suture, which passes through conjunctiva, capsule, and muscle, and is carried through the centre of the conjunctival band left at the corneal margin.

The operation seems to be indicated in myopathic and paretic strabismus, and is peculiarly useful in cases of high degree of aberration when combined with tenotomy of the contracted muscle; also in slight degrees of squint, in which we might easily make an over-correction by tenotomy.

According to Dr. Knapp, the sutures may be removed on the following day, if over-correction is feared, or several days later, if not. Great stress is laid by De Wecker on rotating the ball in the direction of the effect desired while the sutures are being tied.

It is pertinent to state that the caruncle was prevented from sinking by the method of placing the suture as described in the tenotomy; it is quite possible that at the same time the capsule was unintentionally advanced.

130 LEXINGTON AVENUE.

"CONTRARY" ACTION OF ANTIPYRINE.—Dr. S. Laache reports the following case in the *Norsk Magazin for Lægevidenskaben* for August, 1886. A man, aged twenty-five, with symptoms of incipient phthisis, had a fever of moderate intensity, though very obstinate, for which antipyrine (from thirty to seventy-five grains a day) was ordered. On the tenth day an eruption simulating measles appeared, and the remedy was discontinued. Two weeks later the temperature began to rise, and antipyrine, thirty grains, was again ordered. Soon the patient began to complain of a burning sensation in the mouth, which radiated into the pharynx, nose, and eyes. He became nauseated and vomited, and half an hour later had a severe chill. The temperature rose very rapidly from 100.8° F. in the morning, to 105.3° F. in the evening. The pulse rose to 160, but the respirations remained easy, and at about twenty in the minute. The following day the whole body was covered with a scarlet rash, the conjunctivæ were injected and the eyelids swollen. The temperature fell gradually during the day, and was only 97.2° F. on the second morning. The burning sensation had disappeared, and the patient complained of nothing, but had no appetite. The eruption faded slowly, and was scarcely visible on the fifth day. The writer believes that the drug was pure, as a dose of the same was given to another patient without causing any unusual effects. He excludes idiosyncrasy, as the same patient had taken the remedy before for ten days, with no other bad effect than the production of an exanthem. The man was taking arsenic at the time, but was also taking it when the first course of antipyrine was exhibited.

Clinical Department.

A SHORTENED CORD COMPLICATING LABOR.

Dr. G. F. Harvey, of Parsons, Kan., writes: "Among the causes of difficult labor shortness of the cord is one that does not often present itself to the ordinary practitioner. With this belief I venture a report on the following observations, hoping it may be found suggestive to those who may meet with a similar case, and induce them to adopt at an earlier period than I did a course of action which would save anxiety. Mrs. A ——, of good general physique, was engaged in her second labor, the head presenting in the first position, with no unusual symptoms. The first stage passed naturally, os dilated fully, and the membranes ruptured. Strong and frequent pains set in, and continued for two or three hours without engaging the head, which was drawn with each pain toward the right side of the pelvic brim, and although repeatedly placed in position made no advance. As time passed the patient became unmanageable from the intensity of the pain, which seemed to centre on the right side of the abdomen, where the smaller bulb of an hour-glass contraction of the uterus could be felt. This was grasped at every pain with loud cries of 'being torn to pieces,' and appeals for 'a knife to cut it out.' Under chloroform the consultant applied the forceps, but under such disadvantageous circumstances and with so much hemorrhage that I thought it safer for the patient to turn, which was done without much difficulty, except for the paralyzing effect of the uterine contractions upon the hands. There seemed plenty of room in the pelvis for the body to come down, but it took the united pull of counsel, nurse, and myself, with fingers in the child's mouth, to deliver the head, which, with the placenta compressed into a ball, came out together with a noise like the pop of a cork from a jug—the release of tension being so sudden that they both fell to the floor. The cord was drawn many times round the neck of a strangled child, the free end being so short that in unwinding it the placenta swept round close to the head, being less than four fingers'-breadth long. It was thought that the short end of the cord, drawing on the placenta, excited the abnormal contraction of the right side of the uterus and caused so much agony to the mother, at the same time drawing the head out of the axis of delivery. As there was not any hemorrhage until that following the use of the forceps, it is very probable there was no separation of the placenta before that time. This was the first case of the kind that had been met by counsel or myself in an obstetric experience of nearly twenty years. Hence my starting proposition that they are not a common complication of labor."

SCARLET FEVER AND THE PUERPERAL STATE.

Dr. G. F. Harvey, of Parsons, Kan., reports the case of a woman, who, "on the seventh day after childbirth, got up to have her bed remade, during which a neighbor's infant was laid upon it; when taken off the child was seen to be covered with a red rash, and it died of scarlet fever during the week. On the following day the patient, having passed a restless night, was found with a temperature of 104° F., dry skin, red strawberry tongue, complaining intensely of headache, smarting of the eyes, and burning pains in the abdomen, limbs, and feet. There was a tendency to delirium, the abdomen was swollen and very tender, the lochia had almost stopped, and had a very offensive ammoniacal odor. Her first child, about two years of age, had been taken sick also through the night, and now presented a clear case of scarlet fever, and in due time desquamated. For about five days the mother's condition was quite critical, large doses of opium being necessary to control the abdominal pains, which were spasmodic in character, and accompanied by an almost constant belching. Recovery took place, there not being any sore throat, rash, desquamation of the skin, or other symptoms of scarlet fever, except 'the tongue' and smarting of the ocular conjunctiva. Since this time the patient has been again delivered normally. I was not present, although called about the second week to treat her for abdominal colic, with eructations similar to those above referred to, and I was told she had had stomach-aches very frequently since, although before her health had been superb. Her first labor was natural. I had acted as counsel at it, in the first stage, during which she had been wrongly instructed to make strong bearing-down effort twenty-four hours before full dilatation occurred. About a month or six weeks after the patient and child were convalescent the husband, a plasterer, did some work at a house several blocks distant. Precautions had been taken to exclude him from contact with the family. In about three days a little girl came down with scarlet fever. She had been met outside the house, taken up and kissed on the occasion of the first visit of the workman. During the month following six children of this family were attacked by the disease, three of them having severe throat symptoms. The mother, who was very near her confinement, nursed them all through, and while the last three were still in bed, was delivered, a face presentation making a tedious labor, but without any hemorrhage until the placenta was delivered by expression half an hour or more afterward. There was no manual interference in the delivery after the discovery of what was thought to be vertex presentation early in the case—and, contrary to custom, the same with the placenta—so it is very probable there was no abrasion of the parts, as there was no appearance of blood on the child. A point is made of this, as it is thought that micro-organisms do not commonly affect the parts of parturients unless there is some solution of continuity for them to nestle and propagate in. The patient made a good recovery, and resumed her duties on the ninth day. The babe took scarlet fever on the fifteenth or sixteenth day, had sore-throat, swelled neck, fever, general rash, and desquamated skin and hair. Scarlet fever had been prevalent about this time, and I had learned of two ladies dying of puerperal fever in our community—one, a primipara, who, in the first week had inhaled air that blew over a lawn on which was spread the bedding of a child that had recently died of this fever, and the other was exposed in some way unknown to me. I would gather from these observations that antiseptic precautions are more especially necessary, after instrumental and primiparal labors, during the prevalence of infectious diseases, while it is not of importance in cases which suffer no lacerations of the genitals."

Memorizing Doses.—Dr. G. A. Wiggins, of Philadelphia (*Medical World*, August, 1886), gives some general rules, with their exceptions, which are thoroughly reliable: 1. The dose of all infusions is 1 to 2 oz., except infusion of digitalis, which is 2 to 4 drs. 2. Dose of all poisonous tinctures is 5 to 20 minims, except tincture of aconite, which is 1 to 5. 3. Dose of all wines is from ½ to 1 fl. dr., except wine of opium, which is 5 to 15 minims. 4. Of all poisonous solid extracts you can give ½ gr., except extract of calabar bean, which is $\frac{1}{16}$ to ¼ gr. 5. Dose of all dilute acids is from 5 to 20 minims, except dilute hydrocyanic acid, which is 2 to 8 minims. 6. Dose of all aquæ is from 1 to 2 ozs., except aqua lauro-cerasus and aqua ammonia, which are 10 to 30 minims. 7. Of all syrups you can give 1 drachm. 8. Dose of all mixtures is from ½ to 1 fl. oz. 9. Dose of all spirits is from ½ to 1 fl. dr. 10. Dose of all essential oils is from 1 to 5 minims.

Progress of Medical Science.

RESECTION OF THE HIP IN A PHTHISICAL SUBJECT.—As the question of operation for local tubercular affections in subjects with pulmonary involvement is still a matter in dispute, the following case, reported by M. Henri Bresson in *Le Progrès Médical* of August 14, 1886, is deserving of notice. A girl nine years of age was brought to the hospital to be treated for hip-disease. There were no tubercular antecedents, but on admission there was found to be trouble in the lungs as well. There was flatness on percussion at both apices, especially the right, and on auscultation there was exaggerated vocal resonance; the respiratory sounds were blowing and jerky, and there were numerous moist râles on both sides with inspiration and expiration. The child was very pale and weak, with no appetite, had a persistent diarrhœa, and coughed incessantly. An abscess appeared at the hip, and was opened antiseptically, but the symptoms, both local and general, grew steadily worse. At the solicitation of the parents Dr. Cazin resected the hip, removing a portion from the articular extremity of the femur, and scraping out the diseased bone from the cotyloid cavity. The wound healed by first intention, and in a few months the child was walking about without crutches, with only about half an inch of shortening. The general condition improved steadily, the sweats and the diarrhœa ceased, the appetite returned, and the patient gained in flesh. There was also a marked improvement in the pulmonary symptoms, all the physical signs having disappeared at the time the child left the hospital, with the exception of a scarcely appreciable dulness at the right apex, and a few crackling râles audible only on coughing

RESECTION OF THE LUNG AND EXTIRPATION OF A KIDNEY.—M. Demons read an interesting note at a recent meeting of the Paris Surgical Society. An adult was stabbed between the ninth and tenth ribs. A portion of the lung-tissue protruded and formed a mass about as large as an apple; the same day the patient passed blood with his urine, indicating a wound of the kidney. M. Demons resected, by means of an écraseur, the hernial portion of lung, and applied the thermo-cautery to the surface. Some days after the operation there was purulent effusion on the left side of the thorax; chemical analysis of the fluid proved it to be principally urine. It was decided to remove the kidney. Nephrectomy was performed in the lumbar region; the twelfth rib made the operation more difficult, but M. Demons, remembering M. Le Dentu's opinions, carefully avoided cutting it. The pedicle of the kidney was divided and carefully ligated. The wound was sutured with metallic threads; reunion took place by first intention, but two months subsequently a mass of cellular tissue sloughed away and opened the cicatrix. It is now six months since the operation was performed, and recovery appears to be perfectly established.—*London Medical Record*, August 15, 1886.

A REMARKABLE MONSTROSITY.—At a meeting of the South Indian Branch of the British Medical Association, Mr. Browing (*The Indian Medical Gazette*, July, 1886) presented some notes of a case of monstrosity on exhibition at Hyderabad. The boy was twelve years old, and, except for the deformity, was well formed in every respect. The monstrosity occurred as an almost perfectly formed upper and lower extremities, about as large as those for a child eight years old, attached to the epigastric region by short, fleshy pedicles. The upper extremities sprang from the ensiform cartilage, which was turned outward at a right angle with the sternum. On the under-side of the pedicle, and lying between the humeri, was a bone with a sharp inferior angle, like that of an ordinary scapula; both humeri articulated with this bone and were freely movable upon it. The arms were fairly well formed, but the forearms and hands were deformed. The lower extremities were attached by a pedicle, which contained several strong, fibrous bands attached to the iliac bones. The buttocks springing from this were fully formed, and presented dimples over the base of the sacrum and the trochanters. The buttocks bore a strong resemblance to those of a female, and on either side of a depression corresponding to the site of the anus were two rounded elevations like the labia majora. On twisting the buttocks around, the penis, stunted but otherwise perfectly formed and with the prepuce, was seen. The integument surrounding the base of the penis was like mucous membrane and darker in color than the surrounding skin, and formed a depression into which the penis was received when the thighs were approximated. During the examination of these parts about half an ounce of fluid, like urine, exuded from the penis, and it was learned that this took place daily some three or four times, but that it had no connection with the micturition of the boy, and that he was not conscious of the act on the part of his parasite. The odor and general appearance of the genitals were like those of a female. The knees were anchylosed and the feet were somewhat deformed. The child could not voluntarily move any of the accessory limbs, but sensation was present in them, the boy being able to localize the place touched. An examination of the abdomen revealed a large mass extending beyond the umbilicus and filling up the right side of the abdomen. In spite of his deformity the boy walked and ran freely. The boy was of a healthy family, and had several perfectly formed brothers and sisters.

DISLOCATION OF THE TESTICLE.—Dr. Smith reports in *The Indian Medical Gazette* for July, 1886, the case of a soldier who was struck with a rifle-butt in the scrotum. He complained of great pain, and examination showed absence of the left testicle from its normal position, and the presence of a small, rounded tumor, very sensitive on pressure, in the groin about at the internal ring. Nothing was done for the man except to relieve him of heavy work. Some months later the soldier died of beri-beri, and on post-mortem examination the testicle was found lying within the abdominal cavity, where it had contracted some adhesions to the peritoneum. A slit was seen at the internal ring, through which the little finger could be passed into a pouch running toward the scrotum. The man stated, at the time of the receipt of the injury, that the two testicles had always been present in the scrotum up to the time of the accident.

WOUND OF THE ORBIT.—Dr. Wm. Fraser relates in *The Lancet* of August 28, 1886, the case of a boy, eleven years of age, who was brought to his office, the schoolmaster saying that the boy was running with others to school, and while climbing the gate he slipped, running a slate-pencil he had in his hand into his eye. On raising the upper lid of the right eye the end of a slate-pencil could be seen protruding at the inner canthus, between the lower lid and sclerotic, the direction being downward, inward, and toward the nose. With a forceps the writer was just able to catch it, and it took a steady, hard pull to extract it, the point being tightly lodged in the bone. It measured one and five-eighths inch, one and a half inch being out of sight. The wound was dressed with benzoic acid on damp cotton-wool. The following day the eye was not much swollen, and there was no ecchymosis at all. The boy could see quite clearly. There was a little tenderness toward the bridge of the nose. At the end of a week the boy was well, and there was neither swelling nor pain in the eye. The accident occurred three months ago, and there had never been any complaint of the eye since.

THE FEE: Put not off till to-morrow—the taking of the fee.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE ORGANIZATION OF FOREIGN BODIES WITHIN ANIMAL TISSUES.

IT is well known that many animal substances, such as catgut, decalcified bone, and even sponge, may, under favorable circumstances, undergo organization when enclosed within living tissues. And however great may have been our astonishment when the possibility of such a change was first demonstrated, we now regard it as a very natural process, since it is but the conversion of one animal tissue into another, and the revivification of a substance containing the germs of life within its cells. But, however familiar we have become with this power of assimilation of animal substances which is inherent in the living tissues, we should hardly have been ready to admit a little while ago that vegetable substances could in like manner become organized and incorporated into our tissues without having first been disintegrated and worked up in the laboratory of the chylopoetic system. Yet some recent experiments, and in particular one made recently by Professor C. Vanlair, of Liège, would seem to prove beyond doubt that such a change may take place.

In an article in the *Revue de Chirurgie* for August, 1886, M. Vanlair writes that he was making some experiments in the tubo-suture of nerves, using for this purpose rubber drainage-tubes, as he had found decalcified bone to become too speedily absorbed. In one of these experiments he employed a tube of ordinary gray vulcanized caoutchouc, having a diameter of one-fifth of an inch and measuring an inch and a fourth in length. The walls of the tube were three-fiftieths of an inch thick.

The experiment was partially successful as regards the regeneration of the nerves, but the point of greater interest was the metamorphosis which the rubber tube had undergone. It had been in position seven months and a half, and had apparently undergone partial absorption; for its upper end was nearly intact, but it became gradually thinner until it finally disappeared. On microscopical examination it was seen that the substance of the caoutchouc had lost its amorphous appearance and had acquired a complicated structure. Two different systems were to be distinguished: First, a more or less homogeneous parenchyma, and, secondly, a very large number of blood-vessels.

The stroma, forming a compact, resisting mass, was divided into fine connective-tissue fibres, united irregularly into bundles—wavy, crossing each other in every direction, and receiving a bright rose-colored stain in boracic carmine—and into cells occupying the interfascicular spaces. These cells were of an average diameter of twenty micro-millimetres, and some were polygonal with blunt angles, while others were slightly elongated though not fusiform. They had large nuclei, ten micro-millimetres in diameter, enclosing one or more large nucleoli. Sometimes the cells were more or less kidney-shaped, but there was no appearance of segmentation. The cellular elements were distributed irregularly between the fibrous bundles.

The vessels were very numerous, and belonged to the type of capillaries. In some the walls were formed of a continuous layer of elements, for the most part flattened and resembling normal vascular endothelium. In others there was a simple and regular cellular layer resting upon a fine membrane formed by fibrilli similar to those of the parenchyma, and containing within their meshes a number of cells identical with those of the parietal layer. In a third type the cellular lining of the vessel was formed of several layers of irregularly placed epithelioidal cells, nearly filling the lumen of the capillary. Finally, there was a rudimentary form, presenting on section a fibro-cellular ring, the interior of which was traversed by delicate trabeculæ containing in their interstices a few epithelioidal cells. None of these vascular membranes presented any traces of muscular fibres, nor were the walls formed of any distinct tunics.

The outer surface of the tube was very irregular and presented a fungous appearance, while the inner surface was smooth and showed no distinct line of demarcation from the subjacent tissues. At its lower part the tube had become assimilated to the surrounding connective tissue, and had finally disappeared. But this was not a resorption analogous to that of drainage-tubes remaining long in suppurating tissues, but was rather a true organization of the substance of the caoutchouc.

That indiarubber can thus become organized is the more remarkable when we consider that it is a pure vegetable exudation, devoid of all structure, and seemingly more calculated to act as a foreign body and to prevent the union of wounded surfaces than to undergo organization and to become thus an integral part of the animal tissues.

FLAT-CHESTED WOMEN AND THE HIGHER EDUCATION.

"IT would be a curious and not uninstructive task to take a census of the nursing-bottles in use in the various civilized countries. It would be a tolerably accurate index of the animal powers of women in those countries. It is extremely probable that twice as many are in use in America as in any two or three countries in Europe, and when we come to compare this country with China, for example, it is safe to say that we destroy more nursing-bottles each year than have been used in China since the instrument was thought of. Our education, our civilization, is one that stunts, deforms, and enfeebles women, and as such it must be unsound."—*Journal of American Medical Association.*

This may all be true; but there is no greater fallacy than that of associating the flat chests and milklessness of American women with higher education. It is only

the minutest fraction of one per cent. of American women who get such an education anyway. We feel quite sure that the American fathers who smoke and drink and tear through life at such a rattling pace are much more responsible for nervous, unfruitful, flat-chested women than educational over-pressure.

THE PROGRESS OF HOMŒOPATHY.

THE homœopaths have been holding an International Congress at Basle, Switzerland. It was the Third Quinquennial Congress, and was attended by only forty delegates, of whom seven were from America. The sessions seem to have been largely occupied with persuading the members that homœopathy is growing. It would take a brave heart, however, to find encouragement in the various reports presented. Thus, by their own figures, we learn that in France there are but 200 homœopaths, in Belgium about 60, in Switzerland 23, in Spain 137, while in Germany and England the reporters do not venture to estimate the number. Judging from the statistics given, it would be a large estimate to suppose that in all Europe there were 1,000 homœopaths.

The real hope of homœopathy appears, therefore, to be in this country. Here, it is stated, there are over ten thousand homœopathic practitioners, with fourteen medical colleges, fifty-one hospitals, forty-eight dispensaries, one hundred and forty-three societies, twenty-two journals, and thirty-three pharmacies. There is no doubt that the United States is infested, beyond any other country, with the silliness of attenuations and potentializations. It appears to be one of the social disorders to which new countries are subjected, but it is one which, despite the apparent showing of statistics, the United States is surely outgrowing.

BRIGHT'S DISEASE AND PSEUDO-BRIGHT'S.[1]

PROFESSOR MARIANO SEMMOLA, of Naples, recently read before the Académie de Médecine of Paris a paper upon the pathology and treatment of Bright's disease which is likely to attract much attention.

The objects of the communication are announced categorically as follows:

1. The control of preceding researches by the author and an explanation of points that have been criticised.

2. The presentation of new experimental studies of Bright's disease.

3. Exhibition of the histological changes in the skin in Bright's disease.

4. The demonstration by clinical and experimental researches of the unicity and constant character of Bright's disease.

5. The indication of some errors previously held as regards treatment.

True Bright's disease, according to Semmola, is a well-defined affection, not of the kidneys primarily, but of nutrition, having the following characters:

1. A peculiar etiology, viz., the excessively slow action of humid cold upon the skin.

2. There is a progressive defect reaching to complete abolition of the functions of the skin, due to a progressive ischæmia, with atrophy of the sweat-glands, of the Malpighian layer, with a connective-tissue proliferation of the derm.

3. There is a chemico-molecular alteration in the ingested albuminoids, an alteration characterized by a morbid diffusibility, and, in consequence, lack of power to be assimilated. They are, therefore, eliminated by the emunctories of the body, and, of course, mainly by the kidneys.

4. There is a progressive lessening in the combustion of albuminoids, and, in consequence, a lessened excretion daily of urea, and a lessened amount in the blood.

5. There is a subcutaneous infiltration of serum, beginning in the face, and not standing in any relation with hydræmia.

6. There is a very characteristic cachexia, which is not dependent on the loss of albumen, but on a profound disturbance in assimilation.

7. There is a *secondary* development, very slowly, of an inflammatory process in the two kidneys, producing in these organs the characteristic histological changes of diffuse nephritis, of which the typical form is constituted by the large white kidney.

Professor Semmola attacks the prevalent views, which uphold the clinical unity of Bright's disease, but admits an anatomical plurality so far as the kidneys are concerned.

There is only one true *Maladie de Bright;* but there are sharply characterized forms of what are called "pseudo-Bright's disease." These are the forms produced by syphilis, alcohol, lead, gout, etc.

Professor Semmola thinks it is never difficult to distinguish between true and pseudo-Bright's, as, for example, by the absence of œdema until late; in nephritis of arterial origin; by the small amount of albumin lost through gouty kidneys, etc.

The author insists, then, that the true *Maladie de Bright* is a constant morbid type, marked by a definite and peculiar etiology, evolution, anatomy, nosography, and treatment.

It is upon this point of treatment that Semmola lays much stress. The fundamental therapeutical indications are:

1. To give the patients a food which is the most assimilable possible.

2. To excite methodically the functions of the skin.

3. To favor by every means possible the assimilation and combustion of the albuminoids.

To carry out these indications Semmola recommends, first, an exclusively milk diet; second, methodical and repeated dry friction of the skin, massage, warm douches, and baths; third, residence in a warm, dry, and constant temperature; fourth, the use of iodide and chloride of sodium, increasing it to the point of tolerance; fifth, if, after two or three weeks, the albumin is still present, Semmola gives, in place of the iodide of sodium, the phosphate of soda, or small repeated doses of hypophosphite of soda or of iron, increasing the dose until three or four grammes are taken daily; sixth, the use of inhalations of oxygen; seventh, the abandonment entirely of astringents.

PATENT MEDICINES.

Despite the advancements made in medical science and in general intelligence among the people, the use of patent medicines is steadily increasing both in this country and England. Twenty years ago there were, in Great Britain and Ireland, 11,520 patent medicine venders, and 7,500,000 stamp labels issued. In 1885, the number of venders had increased to 20,279, and the number of labels has increased to 21,500,000. In other words, the amount of patent medicines sold and used to-day is three times greater than it was twenty years ago, and the tax upon it yields to the British Government over $600,000 annually.

While we have not the figures by us, we are confident that a similar, if not greater, increase has taken place in this country.

This increase in patent-medicine taking is due to several causes; but the most potent is doubtless the fact that certain men, with highly developed business instincts, have discovered that, by confident assurances and striking appeals to the imagination, almost anyone can be made to take medicine. Aside from this, we are in a medicine-taking era. People are constantly looking after their health, and this introspection breeds a habit of calling on druggists and the doctor.

There can be no doubt that a people would be far healthier and wealthier if all patent medicines were thrown into the sea; but as this is an unlikely issue, the most that can be done is to attempt the task of educating the people to understand that the patent medicine is an unwholesome element in society, and one which sensible men will avoid.

HAY-FEVER EXPERIENCES.

Despite cocaine and galvano-caustics hay-fever continues to flourish, and the Association of Hay-fever Sufferers at its last annual meeting at Bethlehem reports itself in an unusually flourishing condition. The meeting in question is made up of sufferers from hay asthma, who annually indulge in a sort of rhinopathic love feast, in which experiences in sternutation and allied phenomena are exchanged, and all the remedies heard of or tried during the year are reported upon. The meetings are, therefore, very suggestive, and have about them a picturesque and eye-suffusing interest. We chronicle some of the contributions.

Mr. Fassett stated that he had found relief for two years through the rubbing of a "magnetic physician;" another gentleman highly recommended the use of sanitary woollen clothing; a third believed in the value of strict diet. With great difficulty and after persistent urging the Association succeeded in securing the presence of a distinguished microscopist of New York, whose name is more particularly associated with the Yeast-plant and Hot-water School of Pathology and Therapeutics.

This gentleman gave a lecture on hay-fever, and stated that the morphology of the secretions in this disease and in asthma was identical, and we gather from a not very complete report that the doctor found "spiralis" and various yeasty germs in the sputa of both diseases. Professor Lockwood, in apt connection with this, stated that he had once magnified the discharges (whether under a microscope or by a dose of oil he does not say) of a child two years old, and found in them a perfect botanic garden.

The president very sensibly recommended that all hay-fever sufferers start for an exempt region before their attacks came on, and the ex-president advised sufferers who are compelled to travel to insert in the nose a small piece of sponge kept wet with water. After the transaction of business the Association adjourned—just like any other one.

THE PROGRESS AND PREVALENCE OF BALDNESS IN AMERICA.

The subject of baldness is one that oftener awakens facetious comment than serious investigation. Mr. Virgil F. Eaton, however, has recently published in the *Popular Science Monthly* the results of a very extended inquiry into the causes and prevalence of premature loss of hair among American men. Mr. Eaton's method has been to visit public assemblages of every character and count the bald heads. He finds that in most of the Eastern cities fully thirty per cent. of the men over thirty years of age show unmistakable signs of baldness, while nearly twenty per cent. have spots on their heads that are not only bald, but actually polished with the gloss that is supposed to belong to extreme old age alone.

New York and Boston take the lead in the proportionate number of bald pates, and after these come Philadelphia, Washington, and the Western towns. Mr. Eaton discovers, too, that the more refined the show, the more fashionable the church, the greater is the proportion of bald heads. For instance, when Patti was singing at the Boston Theatre, forty-two per cent. of the men on one occasion and forty-six per cent. on another were bald-headed, while at John L. Sullivan's exhibition of the manly art only twelve per cent. of the men in Mr. Eaton's vicinity were bald. He also found that forty-six per cent. at one of Matthew Arnold's lectures, and less than twenty-five per cent. at a variety theatre exhibited baldness or signs of baldness. At the fashionable Trinity Church of Boston, nearly half of the men were either actually bald or on the road to baldness.

Mr. Eaton's curious observations, therefore, tend to confirm the view that the coming man is to be bald, and that the per cent. of baldness is in direct proportion to amount of education and cultivation which a community receives.

Sir Joseph Lister's Operations.—The foreign correspondent of the *American Practitioner and News*, who has watched Sir Joseph Lister operate, says that he is excessively slow, and is by no means careful in the details of antisepsis. He has given up the spray entirely, and is now using for dressings gauze and cotton impregnated with a new antiseptic. The nature of this is at present a secret. The bold Kentucky correspondent confesses that he "had the cheek to ask Sir Joseph for information on the subject, when he very politely replied that he was sorry to have to decline giving it to me; that it was yet a secret, and he wished to keep it as such until he was fully satisfied as to its efficacy, when he would make it known to the profession. He said that it had been on trial in his wards for many months, and that so far he was greatly pleased with it."

News of the Week.

TYPOGRAPHICAL ERROR.—Dr. W. M. Polk writes: "May I trouble you to say in your columns that, owing to an oversight in looking through the proof of the article on 'Peri-uterine Inflammation,' the first sentence, first column, page 311, reads incorrectly. It should read, 'It is hard to understand that inflammation will behave so differently in *the uterus* from that which occurs in connection with *these organs*.'"

MEDICAL SOCIETY, COUNTY OF NEW YORK.—At the stated meeting of the Medical Society of the County of New York, held September 27, 1886, Dr. Cornelius R. Agnew read a memoir of S. Oakley Vanderpoel, M.D., LL.D., Dr. D. B. St. John Roosa read an obituary sketch of Thomas Alexander McBride, M.D., and Dr. Wesley M. Carpenter read a memoir of Austin Flint, M.D., LL.D. Nominations for officers for the ensuing year were made, together with nominations for twenty-four delegates to the Medical Society of the State of New York, to serve for four years.

THE EPIDEMIC OF PLEURO-PNEUMONIA in one of the great cattle centres of the West has justly excited a wide alarm. Several years ago we showed the great dangers to the cattle industry which this disease entailed, and the especial danger of its getting west of the Alleghanies. The advice at that time given by all experienced in veterinary police, that all infected herds should be quarantined and destroyed, was slow to be received, but it is likely to be acted upon now.

ANOTHER CONVALESCENT HOSPITAL.—St. Andrew's Convalescent Hospital is the name of a new institution which is now open at 206 East Sixteenth Street, in this city.

A CASE OF RABIES CURED by hypodermatic injections of corrosive sublimate and atropine, is reported by Dr. de Pietra Santa, in the *Journal d'Hygiene*. The man was bitten by an undoubtedly rabid dog, and developed symptoms of hydrophobia two and a half months later.

MICROBES CEASE TO EXIST, according to Miquel, at a height above the sea-level of from one to two miles. In city streets, however, there are five thousand to the cubic metre of air.

IT IS REPORTED that M. Pasteur is ill; and a sympathetic contemporary suggests that it is not strange he should feel fatigued after having snatched almost two thousand persons from certain death.

WHEN TO GIVE THE REMEDY FOR TAPE-WORM.—Dr. W. C. Bennett (*N. E. Medical Monthly*) thinks it a mistake to give the anthelmintic fasting; his experience is that it should be given one or two hours after a full meal.

LARGE BEQUEST TO A WESTERN MEDICAL COLLEGE.—We learn from the *St. Joseph Medical Herald* that the late Samuel Ensworth has bequeathed a sum of about one hundred thousand dollars in trust for the erection and maintenance of the St. Joseph Medical College and a hospital to be erected in St. Joseph upon such a site as may be selected.

A NEW WESTERN MEDICAL ASSOCIATION.—The Mississippi Valley Medical Association has set in motion the work of organizing a general association of the profession in all the States and Territories west of the Alleghany Mountains.

DR. R. T. EDES has resigned the chair of Professor of Clinical Medicine at Harvard, and goes to Washington to live.

JEFFERSON MEDICAL COLLEGE.—It looks almost as if Jefferson Medical College would be driven by force of professional opinion to elevate its standard. At any rate, it has of late received publicly some very severe hits. The West Virginia Board of Health, on July 14th, refused to register its diplomas. The next day they rescinded their action, but meanwhile the news of it got abroad and considerable comment was excited. The charge against Jefferson is that no entrance examination is called for, only two courses of lectures are required, and the final examinations are, to put it mildly, not difficult. We have in this city two or three colleges that are no better in these respects than Jefferson. We have often insisted that, even if it be at some pecuniary loss, our large city colleges should institute more rigid courses, and we believe that the time is approaching when such changes must be made or the colleges will lose in character more than they will gain in students.

A WELL-DESERVED GRATUITY.—A gratuity of $50,000 has been granted from the Bavarian Civil List to the widow of Professor von Gudden, of Munich, who perished with the late King of Bavaria in the lake at Castle Berg. He left a family of eleven children.

PROFESSOR VON ARLT, of Vienna, is reported to be seriously ill with gangrene of the leg.

THE UNMITIGATED NUISANCE (to nine-tenths of subscribers) of "The Educational Number" of the English medical weeklies is upon us now.

MR. LAWSON TAIT is in a peck of trouble. First of all, he is experiencing the results of writing too much and reading too little. In a letter to the *Journal of Obstetrics*, he attacked the German surgeons for their work in hysterectomy, and said that these surgeons would never venture to publish the detailed statistics of their cases, as is done by English surgeons. In a reply to this, published in the *Journal of Obstetrics* for August, Professor Carl Schroeder says: "I protest against the assumption that only statistics published in this manner deserve belief. This demand is induced by a distrust which, so far as I know, is in no way justified. My statistics of myomotomy are published, the first one hundred cases in Hofmeier's book on 'Myomotomy,' and the whole number up to that time—one hundred and thirty-five cases—in the seventh edition of my work on 'Diseases of Women.' If Mr. Lawson Tait pronounces these figures incorrect, I shall not discuss the matter with him, since I do not care to carry on a literary discussion with an opponent who takes me for a falsifier." It thus appears that the kind of statistics which Mr. Tait thought would never be published at all, had already been printed. We learn from the *Medical Press* that Mr. Tait has recently commenced a suit for libel against a physician who had written something to his discredit.

THE NOTIFICATION OF INFECTIOUS DISEASES BY PARENTS.—Austria has a law compelling, not the doctor, but the parents or head of the household, to notify the authorities at once when any case of infectious disease develops in the house.

M. TARNIER has received an honorary degree of doctor of medicine from Edinburgh University.

PROFESSOR CHEVREUL, of Paris, is probably the oldest scientist in the world. He celebrated his one hundredth birthday on July 31st.

A MONUMENT TO RUSSIAN ARMY SURGEONS.—The foundation has been laid at Kars for a monument to the memory of the surgeons who died while serving in the army of the Caucasus during the Turko-Russian War.

A NEW DISINFECTING COMPOUND for purifying the atmosphere of the sick-room has just been presented to the Berlin Medical Society. Oils of rosemary, lavender, and thyme, in the proportion of 10, 2½, and 2½ parts respectively, are mixed with nitric acid in the proportion of 30 to 1½. The bottle should be shaken before using, and a sponge saturated with the compound and left to diffuse by evaporation. Simple as it is, the vapor of this compound is said to possess extraordinary properties in controlling the odors and effluvia of offensive and infectious disorders.

THE CHICAGO OPHTHALMOLOGICAL COLLEGE is the title of a newly organized institution in Chicago. It is said to be connected with the new Polyclinic.

THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF MICROSCOPISTS at Chautauqua, this year, is said by Dr. James to have been a great failure. This was due chiefly to the lack of accommodations for the members, and the absence of any attractive social features.

MEDICINE AND POLITICS IN IOWA.—We trust that the doctors of Iowa will listen to the appeal made by the *State Medical Reporter* in its last issue. The editor states that the Hon. J. A. Lyon was the most active supporter and main agent in securing the medical registration law. For this he is to be opposed in his present canvass for the position of State Auditor. If he has been of service to the physicians of the State, it is but right that they should stand by him now. The profession will accomplish much more for itself when it has learned the wisdom of acting in complete harmony politically in matters relating to itself.

THE VIRGINIA MEDICAL SOCIETY holds its next annual meeting at Fredericksburg, beginning October 26th.

A REGULAR PHYSICIAN OPPOSING THE IOWA REGISTRATION LAW.—The Iowa *State Medical Reporter* states that a Dr. Perry Engle, of Newton, is president of a society organized to resist the State medical registration law. The *Reporter* adds: "Dr. Engle is a member of the State Medical Society, and a member of the American Medical Association. As a member of the American Medical Association, does he appreciate the fact that, in opposing the medical law he is opposing the resolutions of the American Medical Association, that have been absorbed and become a part of the State law, and does he know the class of men of whose cause he is the champion?"

RETIREMENT OF FRENCH PROFESSORS.—MM. Gavarret, Hardy, and Sappey have retired from their professorial chairs in the Paris Medical Faculty, and are honorary professors.

MONUMENT TO THE LATE PROFESSOR ROBIN.—The friends and pupils of the late Professor Ch. Robin have decided to collect the funds necessary to erect a monument in honor of the memory of that distinguished scientist. The subscription has been opened, and a goodly sum has already been realized.

DEATH OF ANOTHER PATIENT OF M. PASTEUR.—A child, three years and a half old, is reported, in *The Semaine Médicale* of last week, to have died lately from rabies, at Teste. He was bitten by a mad dog on June 14th last. On the 16th he was brought to Paris, where, during ten days, he was submitted to Pasteur's treatment. After his return to Teste, on June 28th, the child was seized, on August 12th, with the first symptoms of hydrophobia, to which he succumbed in a few days.

THE REPORT OF THE THIRD ANNUAL MEETING OF THE NATIONAL VETERINARY MEDICAL ASSOCIATION, held at Washington, December 15 to 17, 1885, is before us, and gives evidence of a praiseworthy effort to raise the status of veterinary medicine. In the introduction the Secretary says: "Just as the American medical profession did not obtain public and world-wide recognition until it presented the imposing front of a united national body—ready to sustain its individual members at home and enforcing respect from abroad—so we as veterinary surgeons cannot hope to earn the social and scientific recognition due to members of a learned profession until the American Veterinary Association shall stand before this and other communities as a compact organization, and show what its aggregate is really made of."

MORALS AND MASSAGE.—English journals are exposing some of the immorality which is said to be associated with the practice of massage by professionals. If the stories are true, many of the establishments are little better than houses of ill-fame. One journal says: "There is only too much reason to believe that the professional *Masseur* exercises his or her skill in the direction of exciting the sensual feelings of the patients, or rather victims, and that the success of the professional rubber is closely connected with effects on the system in this direction." Physicians in this city are often informed of similar practices occurring in such establishments here; and doubtless there are none who do not take proper precautions in recommending massage.

THE ASTLEY COOPER PRIZE.—The Astley Cooper Prize, of the value of $1,500, has been gained by Mr. Bowlby. The subject of the essay was "Diseases and Injuries of the Nerves, and their Surgical Treatment, together with the Operations performed upon Nerve-Trunks in the Treatment of Various Diseases, and Description of the Changes which ensue in other Structures, as well as in the Nerves themselves, from these Operations."

THE COMPULSORY VACCINATION LAW at Leicester, England, has been so strenuously resisted that it is no longer enforced, and eighty per cent. of the children born are not vaccinated.

TURPENTINE IN PHOSPHORUS-POISONING. — M. Ed. Rondot, of Bordeaux, has demonstrated, from clinical observations and experiments, the efficacy of turpentine in the treatment of poisoning by phosphorus, when taken either immediately or even some hours after the poison has been swallowed. The turpentine and phosphorus combine, and are eliminated without causing any other morbid phenomena than a local reaction on the alimentary and urinary organs. It is important to administer the turpentine at the outset, so as to neutralize the greatest quantity possible of the poison.

AN ATTEMPT TO CULTIVATE THE POPPY IN MINNESOTA, for the purpose of obtaining opium, has failed. It is probable that Minnesota is too wide-awake a State for such a plant.

A NEW INTERPRETATION OF "M.D."—*The Southern California Practitioner* tells us of a doctor who went to Riverside for his health, and giving up practice went into the milk business. He printed his cards "J. B. Johnson, M.D. (which means Milk Distributor)." He recovered.

VIRCHOW AND AMERICANS.—A cablegram from Berlin, dated September 21st, says that at the meeting of the German Society of Naturalists and Physicians, Professor Virchow paid a great tribute to America, which was received with much applause. He said that the presence of a large American delegation in the convention was a source of unbounded joy to their German colleagues. The natural philosophers and doctors of Germany and America had for a long period worked shoulder to shoulder, and he hoped the good feeling would continue. He fully expected that a large German delegation would attend the proposed Medical Congress in Washington, if the committee of the American Medical Association succeeded in smoothing over the differences existing in that body.

HOW TO DETECT A MORPHINE-TAKER. — Professor Bull, of Paris, states that there are two ways by which the morphine habitué can be detected, and these are to be found in the skin and in the urine. The skin will be found to be covered with little dark spots situated in the centre of little indurations about the size of a large shot. It is needless to add that these indurations are the result of the little wound of the needle, but as these lesions are generally found on the inside of the thighs, the patient refuses to let them be seen, and in that case examination of the urine will prove of great service. A few drops of tincture of iron are put into the suspected liquid, and if morphia be present a blue tinge will be produced.

A MONSTROSITY DYING.—The daily papers have been giving an interesting account of the monstrosity known as the "twins of Locana." They are boys, and resemble each other very exactly. Their names are John and Jacob. They are separate as far as the sixth rib, and have one abdomen and one pair of legs between them. Jacob moves the right leg, John the left. The twins cannot walk, and keep their balance by lacing their arms around each other's neck. Jacob eats often and heartily, and is the healthier of the two, and, to all appearance, it is he who keeps his brother alive. Recently the twins quarrelled over a toy, and John grew so excited that his heart-blood suddenly ceased to flow, and he changed to a condition of complete lethargy, from which he had not awakened the following morning. The boy suffered from the same complaint a year ago, in Berlin, and Professor Virchow then declared that a recurrence of the lethargy would certainly put an end to the twins' life. We are informed that a number of Vienna physicians are observing the malady, but they entertain little hope for John's life, and if John dies, Jacob must follow him to the grave.

THE LEMON TREATMENT FOR "BILIOUSNESS" is a fashionable thing in England just now. Advocates of this acidulous fruit say that the way to get the better of a bilious system, without blue pills or other drugs, is to take the juice of one, two, or three lemons, as appetite craves, in as much iced water as makes it pleasant to drink without sugar, before going to bed. In the morning, on rising, at least half an hour before breakfast, take the juice of one lemon in a goblet of water.

THE VALUE OF ANTISEPSIS IN MILITARY SURGERY.—M. Maydl states (*Medical Press*) that of 3,000 men wounded in the Bulgarian war, which were brought to Belgrade, only 51 died; of these 22 deaths were the result of tetanus; the surgical mortality was only 0.9 per cent., thanks to the use of antiseptic dressings. This result is the more remarkable as the sanitary condition of the soldiers was very defective. Cases of erysipelas were also very rare, and, in spite of the want of care on the field, M. Blum reports that of 136 cases, of which 116 were lance or sword wounds, 12 complicated fractures, and 10 articular wounds, all treated antiseptically, there were no deaths or purulent diseases. The dressings were done with carbolic gauze, at 0.5 per cent., and the instruments washed with disinfectant fluid at 25 per 1,000. After the first day the wounds were aseptic. This war has, therefore, done much to let us know the value of antiseptic treatment in military surgery.

THE PHYSICIANS OF THE UNITED STATES.—In a recent directory of the physicians of the United States, published by Polk, the total number is given as 85,671, of whom 83,239 are males, and 2,432 females. This makes the ratio of physicians to population about one in 650, allowing for the increase in population since the last United States census. Maryland is the most crowded State, having but 329 people for each physician. Other crowded States are Colorado, 341, Indiana, 396, Oregon, 353. All the remaining States are above 400. New Mexico has relatively fewer physicians than any other State or Territory, with 1,494 people to each medical man. The remaining States and Territories coming above the one thousand mark are Utah, 1,035, North Carolina, 1,029, South Carolina, 1,084. Ohio has 502, and Kentucky, 551. There are relatively more physicians in Ohio than in either Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, or Pennsylvania. Taking the table before us as a guide, the "vacancies" exist in New England rather than in either the Central or Western States. There are relatively more physicians on the Pacific coast than on the Atlantic.

THE DOMINION MEDICAL ASSOCIATION held its nineteenth annual meeting at Quebec, on August 18th and 19th. There were interesting papers and discussions on diabetes and tracheotomy; a case of contagious lobar pneumonia and one of ainhum were also reported. Altogether, the work of the meeting was very creditable. The following officers were elected: President, Dr. J. E. Graham, of Toronto; Vice-Presidents, Drs. Dupuis, Russell, Currie, and O'Donnell. The meeting next year will be held at Hamilton.

A PUBLIC EXHIBITION OF THE "GERMS OF LIFE."—The *St. Louis Medical and Surgical Journal* is justly indignant over the outrageous violation of the proprieties of life made by one of the exhibitors during the meeting of the American Microscopical Society at Chautauqua. We are told that during an entire evening the exhibitor in question was engaged in showing, to a mixed assemblage of non-professional men and women, living human spermatozoa. These were announced on the programme as "the germs of life."

A CAUSE AND A CURE OF CLERGYMEN'S SORE THROAT.—Mr. Thomas Whipham (*The Lancet*) thinks that many cases of clergymen's sore throat are due to the practice by this class of hanging down the head while preaching, or reading in service. Cases are cited in which speedy relief was obtained by the patient's holding the head erect in speaking.

THE PATHOGENIC MICRO-ORGANISM OF DELHI BOIL has been discovered by Dr. Cunningham. It is larger than a lymph-corpuscle, varies in shape, and contains a nuclea-like body which has an affinity for staining material. The organism is classed provisionally with the monedineæ among mycetozoa.

THE MISSISSIPPI VALLEY AND PART OF TEXAS resent the imputation of being malarious laid upon that section by Dr. Billings in his address before the British Medical Association; and they protest against his exhibiting maps of the United States with an inky discoloration of the whole Southwest. Dr. Billings intimates that malaria appears to be unfavorable to the development of scientific research. It is evident from the perusal of our Southwestern exchanges that it is not inconsistent with a lively exhibition of editorial rhetoric.

A CYCLOPEAN MALE FŒTUS.—The very rare monstrosity of a cyclops was presented by Dr. William Craig before the Medico-Chirurgical Society of Edinburgh recently (*Edinb. Med. Journal*). The monster was still-born. It had but one orbital cavity, into which entered a single optic nerve. This divided and was connected with two rudimentary eyes.

JUSTICE IN MISSOURI.—The *Weekly Medical Review* reports the case of a so-called doctor, who was recently tried for practising without a license and who was sentenced to a year's imprisonment. Over a year ago, says the *Review*, a similar case came before the same court, and then the judge directed the jury to bring in a verdict in favor of the defendant. This inconsistency is explained by the *Review* on the ground that in the last case the defendant was a poor man without friends. It is unpleasant to learn that our new medical registration laws develop such incidents as these.

SHOULD THE HEALTHY CHILDREN IN A FAMILY WHERE MEASLES IS PRESENT BE KEPT FROM SCHOOL?—Dr. H. Wasserfuhr in the *Berlin Klin. Wochenschrift* answers this question in the negative. He thinks that the enforced idleness of four or six weeks is injurious; that the spreading of measles by a healthy child, though possible, is a very unlikely event; that practically a regulation excluding such persons cannot be enforced, and that measles is a very mild affection if it attacks children in the school years. This view is the one generally adopted, we believe, by sanitary officers in this country. In this connection we note in the *Allgemeine Med. Central-Zeitung* an authentic report by Dr. E. Heusler of a case in which a physician in charge of some small-pox patients carried the infection into the wards of another hospital, and this despite change of clothing and other precautions.

CONTROLLING SEX AGAIN.—Nothing illustrates the readiness with which any extravagant theory of controlling sex in generation can get the support of clinical facts better than a recent letter of Dr. Heusler, in the *Allgemeine Med. Central-Zeitung*. He supports the Heger-Roth theory that sex may be determined by the position assumed in cohabitation. In a case in which two female children had been born, the husband had always slept on the same side of his wife. He was advised to change; the result was a boy. Case II. Two girls; change in position ordered, result a boy. Case III. One girl; change in position, result a boy. Case IV. Four boys; change of position advised, a girl. Case V. Two girls; change, with result of a boy. Case VI. A boy; no change made, the next two children boys. It is easy to see how statistics of this kind may be almost indefinitely accumulated, since, after parents have had several children of one sex only, the probabilities are always strongly in favor of a change of sex the next time.

CATARRHAL JAUNDICE is to be placed in the list of infective diseases, according to Professor Kelsch, of Val de Grace, who has been studying the subject, especially the epidemics of the disease that occur in armies. M. Kelsch asserts that the simple and malignant forms are one and the same affection, and therefore sums up his belief in the propositions that (1) sporadic or epidemic catarrhal icterus is a specific, infective disease; (2) that the infective agent is developed outside the organism; (3) that it is generated in marshes and in soil abounding in animal and vegetable matter; and (4) that, owning thus a common origin with malaria and typhoid fever, the coincidence of epidemics of jaundice with ague and typhoid is explained.

IN SYRIA the most frequent disease is malaria, and after this syphilis, which especially affects Mohammedans. Pulmonary emphysema is common as a result of excessive smoking.

CHARLESTON MEDICAL RELIEF FUND.

THE following is the list of additional contributions to the Medical Relief Fund:

D. Webster, M.D., New York	$20 00
E. E. Aukes, M.D., New York	1 00
G. H. Newcomb, M.D., Albany, N. Y.	5 00

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Md., September 21, 22, and 23, 1886.

(Continued from page 356.)

WEDNESDAY, SEPTEMBER 22D—SECOND DAY—MORNING SESSION.

THE Society was called to order at ten o'clock by the President, DR. T. A. REAMY, of Cincinnati, O., and the Secretary, DR. JOSEPH TABER JOHNSON, of Washington, read DR. JOHN GOODMAN'S (of Louisville, Ky.) paper on

ERGOT AFTER LABOR,

in which he referred to the use of this agent for preventing after-pains, promoting involution, and preventing post-partum hemorrhage. He rejects it for the first purpose, and regards the doctrine that it hastens involution as an absurdity. The only benefit that can be claimed for ergot after labor is the prevention of hemorrhage, but its use is attended by danger so great that it should not be administered indiscriminately.

DR. BARKER, of New York, regarded the paper as the most original one he had ever listened to in the Society, especially in its peculiar mode of reasoning.

THE PRESIDENT said that he had already, in a paper to be read before the Cincinnati Academy of Medicine, entered his protest against the routine practice of giving ergot after the completion of the third stage of labor. From careful observation at the bedside, and from reflection he had reached conclusions that supported the views of Dr. Woodman with reference to the use of this drug in obstetric practice.

DR. GOODELL, of Philadelphia, thought that the two cases reported by Dr. Goodman had not given him sufficient experience to warrant the statements which he had made. Dr. Goodell had given ergot in about twenty-five hundred cases, and had no reason to say that any harm had been done by it.

DR. ENGELMANN, of St. Louis, used ergot very much less than he did five or six years ago, and believed that the hot antiseptic douche, the faradic current, etc., were much more effective means for bringing about the end for which ergot is administered; but after the contents of the uterus have been expelled ergot will always remain a useful and effective remedy.

DR. PARVIN, of Philadelphia, believed that small doses of ergot merely increased normal contractions of the uterus, and that the effect of the drug is not always to induce tonic contractions. Besides, he wished to contest the assertion that ergot should never be given before the uterus is emptied, for it would be found that the two most successful men in the management of placenta prævia—Ellwood Wilson, of Philadelphia, and Murphy, of England—were men who give ergot.

The paper was further discussed by Dr. John C. Reeve, of Dayton, O.; by Dr. A. J. C. Skene, of Brooklyn; by Dr. Engelmann, of St. Louis; and by Dr. P. C. Williams, of Baltimore, who advocated its use.

DR. THEOPHILUS PARVIN, of Philadelphia, Vice-President, was called to the Chair.

THE PRESIDENT'S ADDRESS.

DR. THAD. A. REAMY, of Cincinnati, O., President, then delivered his address, in which he referred to the work done by the Society during the first decade of its existence; to the death of Albert H. Smith, and paid his memory a high tribute of respect; to the Congress of American Physicians and Surgeons, and recommended that the Society consider favorably the proposition extended to join that scientific body.

He then passed to the consideration of several current topics which possess special importance.

THE ABDOMINAL EPOCH OF THE SURGICAL AGE IN GYNECOLOGY.

Skilful hands are busy everywhere, and remarkable results are reported from all quarters. The statistics of American operators are constantly improving, in some instances reaching a high standard, although they have not yet risen to the high mark attained abroad. The exact reasons for this discrepancy await demonstration. It is probable that the explanation will be found largely in climatic influences and constitutional conditions. Again, it is unquestionably true that, in our country, these operations are undertaken by a relatively larger number of operators than abroad. The rule should be that they should be performed, so far as practicable, only by skilled operators. Surgery with regard to cystic disease of the ovary imperilling life has been eminently successful. But is the operation of removing the ovaries for supposed beginning cystic degeneration, "catarrhal salpingitis," "congestion," "enlargement," etc., always justifiable? He thought that it was not. Have not the glowing reports of such cases, and the cures wrought, together with the facility of the operation and its wonderful immunity from danger to life, led to the extirpation of many a sinless ovary? How often have we seen patients cured by recourse to diet, massage, electricity, vaginal irrigations and medications, postural treatment, etc.; and such recoveries are so numerous as to be painfully suggestive of too much freedom with the ovary, considering our want of familiarity with the minor pathological changes. The truth of this remark is in no way invalidated because of attempts in high quarters to settle this whole question on clinical testimony exclusively. The conclusions reached by Dr. H. C. Coe, in his recent paper on the slight pathological provocations which have been deemed sufficient reason to warrant the extirpation of the ovaries, are not adapted to give rest to the consciences of any who may have been over-zealous in performing spaying without due discrimination.

Statistics are frequently quoted to show the sum total added to human life by the single operation of ovariotomy. But may it not be feared that some one will show the other side of the picture, and that some ingenious statistical cynic will compute the years of human life lost to the human race by this destruction of ovaries whose functional activity is yet unabated? There has been written entirely too much constructive pathology of the ovary. Much of the pathology, he feared, had been created to order to justify the removal of functionally active ovaries after they have been extirpated. We need the "fiat lux" of a practical pathology, sustained by the most extensive comparative investigation, upon healthy and unhealthy organs. A humane and economic conservatism should keep our fingers off these organs until we know whether they are yet capable of performing their function, or whether they are physiologically dead, or whether their possessors can be cured without their sacrifice for minor disease; if the operation must be done, but one ovary should be extirpated, unless positive disease of both be detected on exposure.

The recent practice of Schroeder in leaving the undiseased portion of one ovary is a movement in the right direction. Many of the remarkable cures reported after removal of these appendages must be taken with reserve, until such time has passed as will preclude the possibility of a relapse, or at least render it improbable. Time will, he feared, much change the aspect of some reported cases, and this opinion was not wholly speculative. "Let us as a Society and as individuals do our duty toward women by proclaiming and practising against this unsexing enthusiasm."

Not one word, however, of this should be so interpreted as to detract one iota from the boon conferred

upon suffering woman by the performance of spaying in properly selected cases.

The triumphs of ovariotomy have opened a broad field of possibility in abdominal surgery, both for the gynecologist and the general surgeon. One of the recent innovations of abdominal section is its employment in

SUPPURATIVE PERITONITIS

and the reports from this practice in England are highly satisfactory.

ALEXANDER'S OPERATION

has just entered upon trial, since it has been performed less than one hundred and fifty times. It unquestionably rests upon sound principles, and probably it will have a future. The mortality, however, should lead to testing its utility with great caution and conservatism.

Our manifest inability to detect

EARLY PREGNANCY

is the opprobrium of obstetrics. Hegar's sign, recently brought forward, is no more decisive than many others of a similar character; moreover, it is not new.

The President then spoke of the subject of

DIAGNOSIS,

and said that attention had been apparently so riveted upon surgery that its importance had been lost sight of. The scarcity of investigation and literature on this subject is greatly to be deprecated.

Reference was then made to the scarcity of papers on

MEDICINAL THERAPEUTICS

in the department of gynecology, and to the use of

ELECTRICITY IN GYNECOLOGY,

the utility of which had at last been well established. He had had some admirable results in arresting the growth of

FIBROIDS OF THE UTERUS

by the employment of electricity.

HYSTERECTOMY

for these growths had recently received a wonderful impetus in the remarkable results obtained by Keith and others, particularly in Scotland and England. Schroeder has had a mortality of about twenty-nine per cent. The late Dr. Thomas Wood, of Cincinnati, performed the operation seven times, with two deaths, a mortality of thirty per cent. Dr. Reamy has performed the operation five times, with two deaths, a mortality of forty per cent. It is probable, however, that in all fibro-cystic tumors of the uterus, as well as in all suppurating ones, hysterectomy offers the only hope.

After referring to craniotomy, Cæsarean section, laparo-elytrotomy, the Porro and the Porro-Müller operations, and to the total extirpation of the uterus for cancer, the President spoke of

EPITHELIOMA OF THE CERVIX,

and said that, after a careful clinical study of the subject, in a large number of cases, he unequivocally committed himself to the belief that the cervical traumata of parturition strongly predisposed to the development of epithelioma. It is well established that epithelioma commences in the mucous membrane. In *six* cases seen within the last three years he had removed the neoplasm while it was yet confined to the mucous membrane immediately covering the indurated connective tissue resulting from laceration. Emmet's operation for restoration of the cervix to normal conditions in cases where manifest fissure exists, was, in his opinion, warranted for the sole ground of prophylaxis against malignant disease, if upon no other.

The address was concluded with some remarks with reference to the

UTERINE CURETTE

and the dangers which sometimes attend its employment, but which cannot be foreseen. He reported a case in which the flexible copper-wire instrument passed through the anterior wall of the uterus. The patient recovered.

The President received a vote of thanks for his highly interesting address.

Dr. Fordyce Barker, of New York, then read a paper on

MATERNAL IMPRESSIONS ON THE FŒTUS IN UTERO.

The belief that maternal impressions may affect the nutrition and development of the fœtus in utero has existed from the earliest periods of which there are any records. The oldest evidence of this belief is found in the thirtieth chapter of Genesis, in an account of a business transaction between Jacob and his father-in-law Laban, in which this belief prompted Jacob to adopt a method, which in recent times has become very common in Wall Street, that of doubling his capital "by watering the stock."

The law of Lycurgus, that Spartan women when pregnant should look constantly at statues of Castor and Pollux, representing strength and beauty, so that their offspring might be similarly developed, must have been based upon this belief.

That maternal impressions may affect the form, development, and the future character of the fœtus, has been very generally accepted as true by all women in all ages, and by men so far as they have had any idea on the subject. Medical writers with hardly an exception, down to the beginning of the eighteenth century, express the belief, with more or less distinctness, that fœtal marks and deformations are due to the emotions, desires, or shocks of the pregnant mother. Within the last twenty-five years many papers have been published in which this theory has been strongly controverted; the most able and scientific being, in his judgment, that by Dr. G. J. Fisher, of Sing Sing, N. Y.; but, Dr. Barker thought, it must be conceded that the weight of authority was in favor of the doctrine that maternal impressions may affect the development, form, and character of the fœtus. Quotations were made from Carpenter's, and also from Dalton's "Physiology," in which it is stated that bodily deformities or other peculiar tendencies may result from maternal impressions.

All who disbelieve the doctrine urge that deformities are due to arrest of development, but no one has brought forward any sound physiological reason why this arrest of development may not have been caused by maternal impressions affecting fœtal nutrition by their influence on the maternal blood, as well as by falls, injuries, diseases, etc. Probably the subject had been obscured by the tendency to restrict the term "maternal impressions" to purely emotional causes, whereas it really includes those which have a physical as well as psychical origin.

The paper was discussed by Dr. S. C. Busey, of Washington, who said that any prevalent and current belief must be based upon an element of truth; and that nature never does her work by freaks, but in the world of life, as in the physical world, there is no effect without a cause; there can be no natural deformity simply as the result of chance. Dr. Busey referred to several cases which sustained the view that fœtal deformities may be caused by maternal impressions.

Dr. John S. Billings, of Washington, honorary member, thought it well to occasionally get upon the outer boundaries of our knowledge, as it would enable us to keep in view some slight conception, at least, of our ignorance on certain subjects. To admit what had been claimed for the cases reported, it must be

assumed that there exists a force of which we have no scientific knowledge.

The discussion was continued by Dr. Goodell, of Philadelphia, and was closed by Dr. Barker.

On motion by Dr. Chadwick, of Boston, a committee of three will be appointed to investigate the subject and report at some future meeting of the Society.

Dr. John Byrne, of Brooklyn, then read a paper on

THE TREATMENT OF PROCIDENTIA UTERI BY THE GALVANO CAUTERY.

It is not unreasonable to conclude that kolpo- and perineo-plastic operations can affect uterine prolapsus only in so far as they create obstacles to vulvar protrusion, and only when amputation of a portion or the entire cervix is added to such measures can we look for permanent and satisfactory results. The sole object of the paper was to direct attention to the important gain obtained by the inflammatory processes which necessarily follow such operations and the tension of the parts directly engaged in supporting the uterus, to which the success obtained by many surgeons is to be attributed. This consequence is developed to a remarkable degree by the use of the galvano-cautery in performing amputation of the cervix. An illustrative case was related, taken from the three in which procidentia had been treated in this manner. In six other cases, nine in all, linear cauterization were required. In the case reported, the entire womb and vesical wall protruded. After the operation the vesical and uterine prolapse disappeared totally, and the result, together with its rational explanation, opened up a wide field of inquiry.

Dr. George J. Engelmann, of St. Louis, then read a paper on

ELECTRICITY IN GYNECOLOGICAL PRACTICE,

in which he gave the reasons why this agent had not been used more successfully than it had been, and described in detail the instruments of precision, and also gave some of the rules which should regulate its use if definite results would be obtained and the full value of the agent in gynecological practice be secured.

Dr. W. H. Baker, of Boston, then read a paper on

ELECTROLYSIS IN GYNECOLOGICAL SURGERY,

in which he spoke of the use of the galvanic current in the treatment of uterine fibroids, and also in promoting cure in cases of chronic pelvic cellulitis. The conclusions which were reached were the following: (1) Electrolysis is a useful agent in the treatment of certain cases of fibroid tumors of the uterus as well as chronic circumscribed perimetritic affections. (2) When applied to fibroid tumors of the uterus electro-puncture is the most reasonable and efficient method. (3) In the treatment of fibroid tumors of the uterus by this agency it is not necessary to apply it often. (4) Cases of perimetritic affection treated by this agent should be selected with care concerning the absence of acute symptoms.

The discussion which followed was on these three papers, and was participated in by Dr. Chadwick, of Boston; Dr. Engelmann, of St. Louis; Dr. Sutton, of Pittsburg; Dr. James B. Hunter, of New York; Dr. M. D. Mann, of Buffalo; Dr. Byrne, of Brooklyn; and by Dr. Baker, of Boston.

THURSDAY, SEPTEMBER 23D—THIRD DAY—MORNING SESSION.

The Society was called to order by the President.

Dr. James B. Hunter, of New York, read a paper on

PERSISTENT PAIN AFTER ABDOMINAL SECTION,

in which he spoke of the causes of pain before the operation, referrible to the ovaries, the tubes, and the peritoneum; of the causes after the operation, and referrible to former peritonitis, peritonitis following the operation; and also that referrible to some defect in the abdominal wall, as hernia, painful cicatrix, etc.

Among his conclusions were the following: 1, That abdominal section done for the relief of pain should be carefully followed up and made the subject of inquiry for at least two years; 2, peritonitis of any degree is to be treated for its remote consequences as much as for immediate dangers; 3, secondary operations are generally of no avail, only occasionally afford temporary relief, and rarely effect a cure; 4, a guarded prognosis should be given in all cases of abdominal section for the relief of pain.

The paper was discussed by Dr. A. J. C. Skene, of Brooklyn; Dr. Sutton, of Pittsburg; Dr. W. Gill Wylie, of New York; Dr. Robert Battey, of Rome, Ga.; Dr. H. P. C. Wilson, of Baltimore; Dr. M. D. Mann, of Buffalo; Dr. J. Taber Johnson, of Washington, and the discussion was closed by Dr. Hunter.

Dr. James R. Chadwick, of Boston, then read a paper on

THE BLUE DISCOLORATION OF THE VAGINAL ENTRANCE AS A DIAGNOSTIC SIGN OF PREGNANCY.

The color varies from a violet to the bright color seen toward the close of pregnancy; is seen upon the anterior wall of the vagina, more particularly about the urethra, just below the meatus and on either side of it; is absent in perhaps one-third of the cases during the first three months. He would claim for it a decided value in the early months of pregnancy when it was present; but the absence could not be accepted as evidence that pregnancy is not present.

The paper was discussed by Dr. Emmet, of New York; Dr. Parish, of Philadelphia; Dr. Wilson, of Baltimore; Dr. Engelmann, of St. Louis; Dr. Skene, of Brooklyn; Dr. Johnson, of Washington, and the discussion was closed by Dr. Chadwick.

THE PRESIDENT-ELECT.

Dr. A. J. C. Skene, of Brooklyn, was then introduced and made a few appropriate remarks, after which the Society adjourned to meet at three o'clock.

THIRD DAY—AFTERNOON SESSION.

The Society was called to order by the President.

Dr. R. Stansbury Sutton, of Pittsburg, presented specimens removed by

SUPRA-VAGINAL HYSTERECTOMY

in three cases of uterine fibroids. When fibroids were rapidly growing and the life of the patient was seriously threatened on account of hemorrhage, this operation was probably justifiable; and also in cases in which the woman was unable to earn her living, and it became a question whether or not she would become an inmate of the almshouse, the question of performing this operation should receive careful consideration. There are but few cases in which the operation is justifiable.

The communication was discussed by Dr. J. C. Reeve, of Dayton, O.; Dr. H. P. C. Wilson, of Baltimore; Dr. Wylie, of New York, who believed that the curette, when properly used, will arrest the hemorrhage in most of these cases; and by Dr. Reamy, and the dicussion was closed by Dr. Sutton.

Dr. William H. Parish, of Philadelphia, then read a paper on

THE HIGH MORTALITY OF RECENT CÆSAREAN OPERATIONS IN THE UNITED STATES.

According to statistics prepared by Dr. Harris, of Philadelphia, this operation, performed in good season, when the condition of the woman is favorable, has saved seventy-five per cent. of the mothers and eighty per cent.

of the children in this country. But the number of operations has increased gradually, and the results within the last five years have been steadily becoming worse and worse. The causes for this high rate of mortality were: 1, Delay in performing the operation; and 2, attempts at delivery before making the section.

The paper was discussed by Dr. A. Reeves Jackson, of Chicago; Dr. Baker, of Boston; Dr. J. Taber Johnson, of Washington; and the President, Dr. Reamy.

Dr. Parish, in closing the discussion, said that it could not be decided yet whether Porro's operation or Cæsarean section should be the method for the future.

The President then made a few remarks concerning the work of the present meeting, and thanked the resident members, the physicians, and the citizens of Baltimore for the bounteous hospitality which they had extended to the Society.

On motion of Dr. Wilson, of Baltimore, the Society gave Dr. Reamy a vote of thanks for the able and impartial manner in which he had discharged the duties of president.

"In Memoriam—Albert H. Smith, M.D.," by Dr. Theophilus Parvin, of Philadelphia, was read by title.

The Society then adjourned to meet in New York on September 15, 1887.

OFFICERS FOR THE ENSUING YEAR.

President—Dr. A. J. C. Skene, of Brooklyn.

Vice-Presidents—Dr. John C. Reeve, of Dayton, O.; and Dr. Ellwood Wilson, of Philadelphia.

Secretary—Dr. Joseph Taber Johnson, of Washington, D. C.

Treasurer—Dr. Matthew D. Mann, of Buffalo.

Other Members of the Council.—Drs. W. H. Baker, of Boston; Charles Carroll Lee, of New York; A. Reeves Jackson, of Chicago; and Thomas M. Drysdale, of Philadelphia.

NEW MEMBERS.

Drs. Charles M. Green, of Boston; A. F. A. King, of Washington; E. C. Dudley, of Chicago; A. W. Johnstone, of Danville, Ky.; H. Marion Sims, of New York; B. F. Baer, of Philadelphia; and Joseph E. Janvrin and W. Gill Wylie, of New York.

The following were elected

INVITED GUESTS,

and were invited to participate in the discussions of the present meeting: Drs. G. W. Mittenberger, F. E. Chatard, F. E. Chatard, Jr., P. C. Williams, Henry M. Wilson, Robert T. Wilson, Thomas F. Murdoch, John Morris, A. F. Erich, Thomas Opie, G. L. Taneyhill, Wm. P. Chunn, Thomas A. Ashby, Charles O'Donovan, Wm. E. Moseley, Charles H. Riley, and L. E. Neale, all members of the Baltimore Gynecological and Obstetrical Society; S. Van Ness and A. P. Dudley, of New York; F. O. Donoho, S. S. Adams, Thomas E. McArdle, J. J. Sumner, N. S. Lincoln, and A. Y. P. Garnett, of Washington; X. O. Werder, of Pittsburg; Albert Whiteley, of Delaware; Dorsey Cullen, of Virginia, and P. J. Murphy, of Philadelphia.

RESOLUTIONS AND COMMITTEES.

Dr. John C. Reeve, of Dayton, O., offered the following:

Resolved, That this Society expresses an opinion favorable to the formation of the proposed Congress of American Physicians, but that the Committee be instructed not to favor any plan looking toward a surrender of its distinctive title, character, or that will interfere with the full and entire management of its own affairs in every respect.

The following amendments were offered and accepted, and the resolution was adopted:

1. That this Society does not favor meetings of the Congress oftener than biennially.

2. That the Committee oppose as far as possible the holding of meetings of the Congress in the month of June.

The President appointed the following *Committee on the Congress:* Drs. S. C. Busey, of Washington; Fordyce Barker and T. A. Emmet, of New York; J. R. Chadwick, of Boston; and Joseph Taber Johnson, of Washington.

The following was adopted—

Resolved, That the annual dues be *fifteen* dollars (instead of twenty-five).

MEMBERS IN ATTENDANCE.

W. H. Baker, of Boston; Fordyce Barker, of New York; Robert Battey, of Rome, Ga.; B. Bernard Browne, of Baltimore; S. C. Busey, of Washington; John Byrne, of Brooklyn; James R. Chadwick, of Boston; Thomas M. Drysdale, of Philadelphia; Thomas Addis Emmet, of New York; George J. Engelmann, of St. Louis; Walter R. Gillette, of New York; William Goodell, of Philadelphia; William T. Howard, of Baltimore; James B. Hunter, of New York; A. Reeves Jackson, of Chicago; Charles Jewett, of Brooklyn; Joseph Taber Johnson, of Washington; Charles Carroll Lee, of New York; Matthew D. Mann, of Buffalo; William H. Parish, of Philadelphia; Theophilus Parvin, of Philadelphia; Thaddeus A. Reamy, of Cincinnati, O.; John C. Reeve, of Dayton, O.; William L. Richardson, of Boston; John Scott, of San Francisco; Alexander J. C. Skene, of Brooklyn; R. Stansbury Sutton, of Pittsburg; Ellwood Wilson, of Philadelphia; Henry P. C. Wilson, of Baltimore; W. Gill Wylie, of New York; and B. F. Baer, of Philadelphia.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 8, 1886.

John A. Wyeth, M.D., President, in the Chair.

NOTABLE ATHEROMA OF THE CORONARY ARTERIES AND THE ARTERIES AT THE BASE OF THE BRAIN—FATTY INFILTRATION OF THE PANCREAS.

Dr. Waldstein presented specimens, removed from the body of a man, sixty-four years of age, who died in the German Hospital. The patient had diabetes and albuminuria. The specimens were presented merely on account of the interest in the anatomical lesions, and without reference to the clinical history further than that there were no symptoms whatever which pointed toward disease of the heart, and that the man had suffered from persistent diarrhœa.

On making the autopsy Dr. Waldstein was surprised on finding calcification of the coronary arteries to a degree rarely met with; the calibre of the arteries, however, was rather larger than usual. There was also atheroma of the aortic valves. There was a patch of atheroma in the splenic artery. The arteries at the base of the brain were markedly atheromatous. In the aorta the atheromatous change was much less marked than in the smaller vessels.

The man was very fat. The *pancreas* was a mass of fat nearly throughout the entire organ. The *liver* was fatty and cirrhotic. The *kidneys* were large and of a pale grayish-yellow color.

The President remarked that, according to his recollection, in the cases in which atheromatous coronary arteries had been presented to the Society there had been prominent cardiac symptoms, and there was almost complete occlusion of the vessels.

Dr. Prudden thought that, of the specimens which had been presented within the last year and a half, belonging to this group, there had been localized atheroma in many of the cases, with lesion of the heart-muscle in a good proportion of them.

Dr. Eugene Hodenpyl presented a specimen of

DERMOID CYST OF THE OVARY AND BROAD LIGAMENT.

It was removed from the body of a woman, aged forty-five, who died of pneumonia. The uterus and left ovary

were normal. The right tube (Fallopian) was elongated, measuring 130 mm. The left ovary was enlarged, being 43 mm. in length and 22 mm. in thickness, and it was lower down in the pelvis than normal. Occupying nearly the whole of its substance were three communicating cysts filled with a white semisolid material, composed of fat droplets, epithelial scales, and a considerable number of short, fine hairs. The cyst-wall was formed of dense connective tissue. In the substance of the ovary were a number of very small masses of calcareous material. Within the folds of the broad ligament, and extending from its outer attachment as far as the uterus, was a multilocular cyst, which communicated with those in the ovary. It measured 120 mm. in length, 40 mm. in depth, and 18 mm. in thickness. It contained the same elements as the cysts of the ovary, but its contents were softer and darker in color, and the hair and epithelial scales less numerous.

Dr. Prudden said that he saw the specimen when it was fresh, and it was a matter of interest as to what connection there was between the two cysts; that is, whether they were originally entirely separate, or not. This could not be determined definitely. The specimen showed well the amount of epithelial scales that might collect in such cysts.

The President presented two

URETHRAL CALCULI,

removed from a patient on whom he had operated in 1882 and 1883, and removed five calculi from the urethra, which he had already presented to the Society.

Last winter the man came to him again with symptoms of obstruction, after having had three years of a fair degree of comfort. On examination a stone was found four or five inches from the meatus, and Dr. Wyeth determined not to cut any more strictures as he had done at the previous operations, but to enter the urethra directly from below, remove the calculus or calculi, and leave the patient with a urinary fistula. He performed the operation under cocaine, and without pain to the patient. The two calculi presented were removed, and there were no others within sight or feel in the urethra; there were some within the bladder. The patient had a chill after the operation, followed by high fever, went from bad to worse, and died ten days afterward. An autopsy could not be obtained. Whether or not the patient had diseased kidneys he was unable to say, but Dr. Wyeth had inferred that he did, because prior to the former operations his urine contained large quantities of albumen, although there were no casts, and after that performed in 1883 the patient had almost complete suppression of urine, with chill, etc.

The Society then went into executive session.

A Cool Suicide.—A young man recently killed himself in Paris, leaving a letter in which he alleged his reasons for the act, and also gave an account of how he passed his last day. He said that he had tried to be a journalist, but failed, and he was generally disgusted with life. He rose at 11 o'clock on the last day of his life, breakfasted at the Café Duval, and then went to Longchamps to the races. He bet all the money he could spare, for he did not want to die on an empty stomach, and lost. Then he engaged a room at a hotel, took dinner and a few glasses of beer, and went to the theatre to see "A Midsummer-Night's Dream." After this he devoted a few minutes to "un divertissement galant," and then went home, wrote his letter, and killed himself. He asked, as his dying request, that his body might be cremated.

A Lucrative Practice.—The average fee of a Chinese physician, in his native country, is in the neighborhood of five cents.

Correspondence.

THE PAROCCIPITAL FISSURE.

To the Editor of The Medical Record.

Sir: Referring to your editorial of September 4th, "A New Brain Fissure," I beg space for the correction of some errors, and for remarks upon the subject of encephalic names.

Permit me first to express my gratification at the admission of the probable soundness of my conclusion, that the fissure commonly called "interparietal" embraces two integers, a true parietal and a paroccipital, of which latter the "transverse" of Ecker is only a part. This conclusion, opposed as it is to an almost universally accepted view, was based upon the study of many brains, and the suggestion of a new name was made with great hesitation, and only from the conviction that, in the end, students and teachers of anatomy would find a single word easier to remember and use than a variable phrase like "posterior part of the interparietal." Contrary, then, to the order in which the words occur in the editorial, my "treatment of the fissure" was primarily monographic and only secondarily neuronymic.

The editorial says, as if on my authority, that "the paroccipital fissure is 'yoke-shaped.'" Then follows the remark that "we have never seen a yoke like that figured," and an astronomical comparison which, in view of the weight accorded to The Medical Record's editorial page, might well tend to discredit my generalization as to the typical form of the paroccipital and some other fissures, especially the orbital. I must be allowed, therefore, to say that I, too, "have never seen a yoke like that figured," but also—and this is the essential point—that the term *yoke-shaped* does not occur in my article. On the fourth page, zygal fissures are defined as "H-shaped or quadradiate, presenting a pair of branches at either end of a connecting bar or yoke, the zygon." A zygal fissure *contains* a bar or zygon, a yoke in the most general sense, but that does not imply that as a whole it resembles the specific form of yoke which connects a pair of oxen. If a geometer should name a certain figure *quadrate*, a carpenter would not be entitled to say that it was "square-shaped," and ridicule the geometer because neither of them ever saw a "square" so shaped.

Even if, however, the Greek ζυγόν was applied exclusively to an ox-yoke, the use of a derivative like *zygal* would not necessarily imply that a part so designated resembled the article, or justify a translation into *yoke-shaped*. I am strenuous upon this point, because it exemplifies a distinction which I have insisted upon repeatedly since 1880 (and especially in the article "Paronymy," etc., in the *Journal of Nervous and Mental Disease*, July, 1885), between classical and vernacular terms. The latter are presumably *descriptive* and literally correct; but the former are merely *designatory*, and need not apply with absolute accuracy. For example, no one objects to the retention of *vertebrate* for a group of animals, but the use of the vernacular equivalent, *backboned*, at once arouses the objection that several "vertebrates" have no backbone at all. Again, in speaking of a great French naturalist, who thinks or cares that one of the meanings of *Cuvier* is *wash-tub*?

In the second paragraph of the editorial, *stipes* should be *stipe*, the English singular of the Latin word, which is *stipes* in both numbers. I hope the time may come when, so far as possible, we shall employ English forms or paronymes of Latin words, and distinguish the latter by italics, just as we now distinguish French words. For example, *callosum* is the same in both languages, but would be italicized if used in a Latin sentence or on a figure; the plurals *callosums* and *callosa* would be distinguished not only by the italics, but by the distinctly Latin form of the latter. This matter is also discussed in the paper above referred to.

The statement that, "Ithacally speaking," *fissure* is *gyre*, is probably due to inadvertence, since *gyre* is given on the second page as the synonym of *convolution*, and on the fourth and fourteenth pages *paroccipital gyre* is suggested as a briefer and more appropriate name for *superior annectant gyrus*, and other synonyms of Gratiolet's "*pli de passage supérieur*." The mistake is here corrected, lest it be hastily inferred that my efforts to improve anatomical nomenclature involve a complete revolution in the use of commonly accepted terms.

So far from this, as may be seen by anyone who will read my papers carefully and without adverse prepossession, I have taken things as they are, as they have come down to us from *patres anatomici*, who, apparently, were not pressed for time and never imagined that the structure of the human body would come to be of common interest in an age of less leisure, and, from the standpoint of an investigator and teacher of many years' standing, have tried to "make the best of it."

I have noted the general tendency toward the simplification of terms, and have endeavored to hasten what seemed to be the natural progress of reform. There are very few of my terms which do not occur in the writings of some anatomist of authority. I have selected what seemed to me the best, modified them, when desirable, in accordance with established etymological rules, and—with a consideration for my readers which surely no one will condemn, even if he does not take the trouble to follow the example—have *used always the same word for the same thing*.

My merit, or demerit, as it may be viewed, is essentially that I have done consistently and persistently what many others have done sporadically and spasmodically; my "case" is chronic, while theirs was only acute.

Nor are the new terms put forth without due consideration. They are first tested in the laboratory and lecture-room, and must endure the trenchant criticism of my colleague, Professor Gage, who will even abandon a cat for the sake of dissecting my propositions.

I am in no hurry, and have plenty of patience for those who hesitate. Already, however, there has been enough "aid and comfort" from working anatomists to warrant the prediction that, within twenty years, what my friend, Harrison Allen, calls the "dear old incongruities" will no longer encumber our books, prolong our lectures, confuse the anatomist of another nationality, hinder the progress of the student, and mystify the laity. With few exceptions each part will have but one name, and that a single word of classical derivation, co-ordinated with the names of related parts, applicable to all vertebrates, intelligible to all nations, and capable of inflection and of adoption into other tongues. Instead of *internal perpendicular*, *occipito-parietal*, *parieto-occipital*, and the host of synonyms in all languages, we shall follow Pansch in saying simply *occipital;* while Owen's unmistakable mononym, *subfrontal*, will replace Broca's *convolution*, *third frontal*, *first frontal*, and *infero-frontal*, etc. Instead of *corpus callosum*, we shall say *callosum*, adj., *callosal;* for *pia mater*, *pia* and *pial;* for *commissura anterior*, *precommissure* (Latin, *præcommissura*); for *cornu posterius*, *postcornu;* for *iter a tertio ad quartum ventriculum*, *iter* in particular, and *mesocœle* for the entire cavity of that segment of the brain; in place of *upper*, which means one thing in man and another in the cat, we shall say *dorsal* when we mean it; and instead of using *external*, and leaving the reader to guess whether we mean *superficial* or *to one side*, we shall say *ectal* in the one case and *lateral* in the other.

Admitting that there are questions not yet solved, and that some of the terms proposed by me will be modified, or even rejected altogether, by the committees appointed two years ago by the American Neurological Association and the American Association for the Advancement of Science, I am sufficiently sure of the general correctness of my position to join, perhaps with more than ordinary heartiness, in whatever merriment may be aroused by the editorial reference to "Wilderese," "Ithacan," or, as I would rather it should be called, *Cornellian*, as a medium for the communication of facts and ideas. "Let them laugh who win;" I mean to win, not in spite of THE MEDICAL RECORD, but, so long as its columns are open to me, by its help, even though that help is not intended as such.

Respectfully yours,

BURT G. WILDER, M.D.

SIASCONSET, NANTUCKET ISLAND, MASS.,
September 9, 1886.

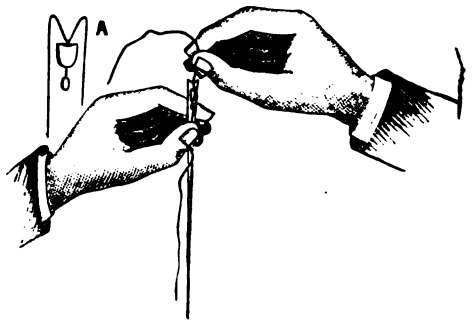
New Instruments.

A NEW OPEN-EYED SURGICAL NEEDLE.

EVERY surgeon has, no doubt, been inconvenienced by the difficulty found in threading needles of the ordinary type. This is particularly the case when twisted or braided silk is employed, requiring a steady hand and a keen eye to accomplish an object apparently very simple.

The needle illustrated promises to obviate all difficulty, and the threading can be accomplished with ease by simply pressing the thread or silk down the slot, as shown in the wood-cut.

This needle is so constructed that there is sufficient spring to allow the thread to enter the eye of the needle,



without cutting the thread, and when once threaded the suture employed cannot again be pulled out. The enlarged view on the left shows the construction of the eye. Below the large eye is a smaller one, connected with the upper eye by a slot. This lower eye and slot form a yielding spring that allows the suture to enter easily, yet it is sufficiently strong to close tightly after the thread enters the eye. A larger or thicker suture can thus be threaded in this needle than could be employed in the ordinary needle. Sutures, however, should be selected to suit the size of the needle employed.

The instrument, which is manufactured in the different shapes and sizes by F. G. Otto & Sons, of this city, is sold at the same price as the ordinary surgical needle.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 18 *to September* 25, 1886.

FISCHER, W. W. R., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, to take effect September 10th, with permission to apply for one month's extension. S. O. 88, Department of Arizona, September 1, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Concho, Texas. S. O. 131, Department of Texas, September 18, 1886.

Medical Items.

THE GERMAN HOSPITAL IN CONSTANTINOPLE was founded in consequence of the death in that city of a German who was unable to obtain proper medical assistance. It was established first in a little wooden house, but recently the German government has erected a fine building on the heights of Pera at a cost of $90,000. The hospital is four stories high, surrounded with a large garden, and is beautifully situated on high ground, from which can be seen Stamboul, the Sea of Marmora, and the coast of Asia Minor. There are six general wards and twenty private rooms, with accommodations for one hundred patients, at a cost of from 75 cents to $1.25 a day. A separate building is provided for contagious diseases, which was erected by the former German ambassador, Prince von Reuss. There are three physicians attached to the hospital, and during the year 1885 over six hundred patients, of fifteen different nationalities, were treated.

NOTIFICATION OF INFECTIOUS DISEASES IN AUSTRIA.—The government of Austria has issued a decree calling upon the heads of families to inform the police authorities of any case of contagious illness occurring in their households; these illnesses include cholera, typhus fever, typhoid fever, small-pox, scarlet fever, diphtheria, dysentery, measles, whooping-cough, chicken-pox, erysipelas, puerperal fever. The following incident, related in the *British Medical Journal*, will show how strictly the above regulation is enforced. A man who had two children attacked with small-pox, and omitted to notify their illness to the police authorities, was condemned to ten days' imprisonment, during one of which he was deprived of food, and another was passed in a dark cell. A medical man, who had seen the children before the eruption appeared, was accused of negligence, but the charge was dismissed on the grounds that the duties of a medical man terminate when he receives his fee.

THE CULTIVATION OF THE WILLOW FOR MEDICINAL PURPOSES has now, *The Medical Herald* states, become an important industry in some parts of this country. The switches, at the end of two years, are from four to seven feet long, and are cut and gathered in bunches like sheaves of wheat. In the stripping-building they are steeped in water, and the bark at the larger end is loosened for a couple of inches by machinery. One by one the switches are placed in a mechanical stripper, and with a pair of pliers are pulled through with a sudden jerk. They are then wiped off with a woollen cloth, bundled, and laid away to dry. All the leaves and bark are dried and baled, when they command a price of twenty-five cents a pound. On one farm in Georgia there are at present 400,000 willows growing, and 80,000 additional slips have recently been put in, it being intended eventually to devote sixty acres to this crop. The average yield is a ton to the acre. When dried, the willows command $200 per ton, and find a ready market.

A BLESSING IN DISGUISE.—Dr. Brandes, of Hanover, writes in a German medical paper that a water plant, the *Anacharis Alsinastrum*, which has always been regarded as a troublesome weed and utterly useless, really possesses valuable properties. He has noticed that in his neighborhood, where malaria and diarrhœa were endemic, these diseases became less prevalent as the weed began to infest the neighboring rivers and marshes, and since four years have totally disappeared. The plant nourishes itself on decayed vegetable matter, and grows with incredible rapidity. The inference is that it thus destroys the germs which produce malaria and diarrhœa. Dr. Brandes suggests that the experiment should be tried of planting the Anacharis Alsinastrum in marshy districts. It is also useful in protecting the young fish, and affords an excellent manure. The plant came originally from Canada, whence it was brought to England, and thence to Germany about 1840. In North Germany it spread rapidly, and this year appears in all parts in unusual luxuriance.

REMARKABLE HYPNOTIC PHENOMENA.—M. Luys stated at a recent meeting of the Biological Society of Paris that he had found certain hypnotized patients susceptible to the action of remedies which were inclosed in sealed glass tubes. The effects were always the same for the same distance, but varied according to the degree of separation of the tubes from the body. Thus a certain substance would cause the patient to become hilarious when the tube was placed in contact with the skin over the nucha, but would excite fear if removed a few inches. Some strange effects were observed. When essence of thyme, inclosed in an hermetically sealed glass tube, was placed near the thyroid gland, there followed an immense swelling of this gland, with exophthalmia and venous congestion of the face. A woman presented all the symptoms of alcoholic intoxication when a tube containing alcohol was placed on the back. Another exhibited signs of hydrophobia when a tube of water was held at a little distance from the body. The explanation offered by several members of the society, to which, however, M. Luys did not assent, was that the effects were due to mental suggestion, since the experimenter knew what substances the tubes contained, and what was their physiological action.

THE ALCOHOL QUESTION IN FRANCE.—The Academy of Medicine of Paris appointed, some time ago, a committee to investigate and report upon the danger to the population from the increasing use of alcohol in that country. The committee reported that there were three ways of preparing wines so as to artificially increase or diminish their strength. One way was to mix two wines of different alcoholic strength, another was to add pure alcohol, and the third was to dilute with water. The first was considered allowable, but the other two processes were condemned as either injurious or fraudulent. The French government was requested to take stringent measures to prevent the importation into the country of artificially alcoholized wine. It was also asked that the number of wine-shops be largely reduced, and that the laws for the repression of drunkenness be more strictly enforced.

A BRUTAL PHYSICIAN.—A French journal states that a physician was called in the night to see a woman in childbirth. The labor was complicated and an operation was necessary, for the performance of which the physician demanded 250 francs in advance. The husband was a laboring man and had but 100 francs, which he offered, with promises to pay the balance. The doctor refused in spite of the man's entreaties. Before another physician could be obtained the woman died in great agony, two lives having thus probably been sacrificed for the paltry sum of thirty dollars.

A NEW SUBJECT FOR EXPERIMENTATION.—A correspondent of *The Medical Age*, referring to the occurrence of abdominal pregnancy, asks whether there is anything in the nature of the female peritoneum that renders it more fit than its male analogue for furnishing nutriment to an attached ovum, and if not, why, under favorable circumstances, ova introduced into the male peritoneal cavity might not attach themselves and proceed to a viable stage of development. He also suggests that the young of one animal might be thus grafted upon a different species.

THE SWISS SOCIETY OF NATURAL SCIENCES held its sixty-ninth annual session this year at Geneva, commencing on August 11th. The meeting was a very successful one, and a number of interesting papers were presented.

THE PATHOLOGIST: He hath made a covenant with death, for his heart panteth for a specimen.

MORPHINE IN POST-PARTUM HEMORRHAGE.—Dr. M. S. McMahan writes to the *N. Y. Med. and Surg. Journal* that he has successfully used the following plan in post-partum hemorrhage for the last fifteen years: On finding the surface of the patient pale, the extremities cold, with profuse hemorrhage, he at once injects hypodermatically from ten to fifteen minims of Magendie's solution of sulphate of morphine. This will invariably, and within a few minutes, produce a flushed surface, warm extremities, and a stopped or much diminished flow. He adopts no other means—no styptics, no cold compresses, and no foolish plugging.

HOW TO ADMINISTER COD-LIVER OIL TO INFANTS.—A good suggestion has been made by Yeldham, of a plan of administering cod-liver oil to infants. Let the nurse dip the end of her little finger in the oil, and put it into the child's mouth. This may be repeated five or six times in the twenty-four hours. In such small quantities, not only does it never disagree, but the child sucks it off the finger with avidity and evident pleasure. It may be administered in this way to the youngest infant. By this simple and inexpensive expedient Dr. Yeldham says many infants who were absolutely starving for natural foods became fat and plump, and happily in an almost incredibly short space of time. The oil has the effect of enabling the child to digest other food, which it could not retain on its stomach without it.

INFLUENCE OF THE FALLOPIAN TUBES AND OVARIES UPON MENSTRUATION.—In a paper on the Pathology of the Fallopian tubes, published in the *Deutsche Medicinische Wochenschrift*, Dr. A. Martin, of Berlin, says, with reference to the theory of Mr. Lawson Tait that the Fallopian tubes have an important influence upon menstruation, that he carries this very far when he argues that "castration performed with the object of diminishing uterine myoma should not imply removal of the ovaries, but rather of the tubes." And he (Martin) then relates a case where, in 1882, the right Fallopian tube of a patient and the diseased part of the right ovary were removed, the rest remaining. The patient was relieved for a year, then suffering began on the left side, and in February, 1883, a hæmato-salpinx was discovered on abdominal section, and the left tube was removed with the whole of the left ovary. Martin says: "I have often seen this patient since March, 1883. Although she had no Fallopian tubes, and only a part of the right ovary, which was left in February, 1881, she menstruates regularly." And he concludes thus: "As this patient menstruates regularly without tubes, and with only a small remnant of one ovary, she is a striking illustration of the Tait theory!"

DR. DACOSTA ON THE TREATMENT OF ACUTE PLEURISY.—In the early stage, when effusion has not yet taken place, the question arises, Shall we employ local blood-letting? In a young, vigorous adult it is good practice to withdraw from f ℥ viij.–xij. of blood. Follow the cups by a poultice, on which place sufficient laudanum. This is a comfortable application. If we do not employ venesection, poultice at once and use counter-irritants. Subcutaneous injections of morphia in small doses near the inflamed pleura are of great value. It is of importance to keep the patient under the influence of an opiate. Dover's powder is a convenient form. Control the circulation by the use of tincture of aconite, in drop doses every hour, as indicated by the heart. When effusion has taken place, do not cup; nor is aconite indicated, since the heart is displaced. At this stage the acetate of potassium and digitalis are of great value, ℥ ss. of the acetate to be given in liquor potassii citratis in the twenty-four hours. Digitalis may be advantageously combined with the above. In a strong man, when the effusion persists, jaborandi is often of decided value. The iodide of potassium is a most useful agent when the effusion tends to linger. During its use add small blisters, repeated occasionally. Often in these cases a gentle mercurial impression will start the effusion; then follow up with diuretics as well as diaphoretics. Sustain the strength, especially in lingering cases, by the use of stimulus. When the effusion is overwhelming, the question of paracentesis comes before us. When delirium begins, and circulation and respiration become irregular, then it is time to tap. If the effusion be double-sided, then aspirate; but, as a rule, a double-sided pleurisy occurs in tubercular patients, so that tapping will not materially lengthen life.—*Coll. and Clin. Record.*

MURRI-MURRI OR STRANGER'S COLD.—In two parts of the world, nearly at the antipodes of each other, there exists the singular belief that the presence of strangers brings on a "cold" indistinguishable from influenza. These places are St. Kilda, in the Hebrides, and Wharekauri, an island about four hundred and eighty miles east of New Zealand. A correspondent of the *British Medical Journal* says: "In order to be infected, a person need not know that a ship has come; indeed, the mere appearance of murri-murri is proof to the inhabitants—even at distant parts of the island, which is thirty miles long—that a ship is in port, inasmuch that, on no other evidence, people have actually ridden off to Waitangi to fetch their letters. There is a hill, whence one can see across the island into Waitangi Bay; and people are wont to climb this hill, and scan the bay for a ship, on no other evidence than the occurrence of murri-murri." There seems to be no doubt about the correctness in the main of the facts, which can be explained on the theory of a vaso-motor neurosis from mental impression, such as is seen in the production of a "rose-cold" from an artificial rose.

"EDUCATE A WOMAN AND YOU EDUCATE A RACE."—This is a saying full of promise if it be rightly interpreted, full of dire disasters if applied to the mind to the exclusion of the body. While it may be true that too much bodily labor may render women less prolific, it is very much more clearly shown that excessive mental labor is a cause of sterility (or infertility). "In its full sense," says Mr. Herbert Spencer, "the reproductive power means the power to bear a well-developed infant, and to supply that infant with the natural food for the natural period. Most of the flat-chested girls who survive their high-pressure education are unable to do this."

SULPHATE OF SPARTEINE.—Hans Voigt, says *The Lancet*, working in Nothnagel's clinic, has come to the following conclusions respecting the therapeutical action of sulphate of sparteine. In small doses the salt increases the efficiency of the cardiac contractions and raises the arterial pressure. The number of heart-beats is always increased. These effects are observed within an hour of the administration of the drug, and continue for twenty-four hours. The author recommends the suspension of the administration of the drug for some days, but it may be given for a week without risk. The remedy does not always regulate the rhythm of the heart-beats. Its action on the respiration is variable. Diuresis appears to take place in proportion to the improvement of the cardiac action. A beneficial sedative action is often observed. Headache, vertigo, malaise, and other objectionable symptoms were but rarely met with as the result of the administration of small doses. The dose employed has been from one to four milligrammes. It will be remembered that in Sée's hands much larger doses (five to twenty centigrammes) were tolerated without cumulative or other objectionable effects.

NAPHTHALIN AS AN ANTHELMINTIC.—Dr. Coriander, of Samarkand, recommends naphthalin as a valuable and economical remedy, especially in country and military practice, for worms, both tænia and ascarides. He gives children of from one to three years of age two or three grains twice a day. In the case of adults he gives from twenty to eighty grains a day in powder with sugar.—*The Lancet.*

The Medical Record

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MEDICAL LIBRARY BOSTON CITY HOSPITAL

Original Articles.

CEREBRAL PARALYSIS IN CHILDREN.[1]

BY V. P. GIBNEY, M.D.,

NEW YORK.

FROM the title of my paper I would not have the practitioners assembled this evening infer that any attempt at cerebral localization is intended. I simply wish to present a short paper based upon a case in my own practice and one or two that I have seen in the practice of my friend, Dr. L. E. Holt. All are more or less familiar with the later results of inflammatory brain lesions as they occur in children. Few of us, I take it, are familiar with the manifestations at the time of the lesion, and hence my reason for placing on record a case that I was fortunate enough to observe from the beginning of the attack.

At six o'clock in the morning, on February 5, 1886, I found a child, to whose bedside I had been summoned at this early hour, in general convulsions, which had lasted for twelve hours.

My little patient was a boy four and a half years of age and he had been for nearly two years under my care for congenital equino-varus of both feet. His general health had been unusually good, and there was nothing in the family history that led me to believe that he would inherit any of the chronic diseases with which we are familiar.

The little personal history that I had learned on my way to the house that morning was this: For at least a fortnight, beginning say about the middle of January, he had been restless at night, gritting his teeth and showing some signs of fever. He had not been confined to the bed, or even to the house during this period. The family had been living in a house that was noticeably damp, and the plumbing was thought to be defective.

On the evening, then, of February 4th, about six o'clock, he was much more indisposed than usual, and was soon in general convulsions. A neighboring physician was called and his efforts during the night to control the attack had not been attended with success, and on my arrival in the morning the case was placed in my hands.

I found, soon after entering the house, a rectal temperature of 106.2° and lost no time in getting my little patient into a bath of 95°. At the end of ten minutes the convulsive movements ceased and he soon fell asleep in the bath. I did not remove him until forty-five minutes had elapsed, when I found the rectal temperature 102°.

He continued to sleep quite normally after being laid in the bed, and I left instructions to call me on the recurrence of convulsions or on the rise of temperature. I was not called, but visited him again at 6 P.M. of the same day, when I found the temperature 101°, and learned that he had slept until toward noon, when he awoke and appeared conscious all the afternoon. He had not made any attempt at talking, however. I thought it best to leave him undisturbed, and, in view of the history that I had obtained in the morning, jumped to the conclusion that he was suffering from malarial poisoning, and ordered quinine in five-grain doses.

Next morning, the 6th, he was quite comfortable, and the report was that he had passed a good night. Still he had not spoken, and I could not induce him to speak. When asked to show his tongue he would open the mouth wide, yet did not seem able to protrude the tongue. He did not use the right upper extremity, but did move the right lower quite easily, though not with the same degree of force that he used the left. The whole of the right side was hyperæsthetic, though the degree of hyperæsthesia was not measured. The temperature had not risen above 101°. I did not see him in the evening, but the next morning, the 7th, now the third day, he was still able to move the right lower extremity, but it required a much greater effort on his part than was required on the morning preceding. The tongue was still held tightly within the bottom of his mouth when he attempted to protrude it. It was reported that there had been during the night an occasional clonic spasm of the right arm, though without any loss of consciousness. A possible poliomyelitis high up in the cervical cord suggested itself to me, and I ordered a fly-blister to the nape. The temperature was still ranging about 101°.

February 8th, fourth day.—He was still unable to speak, the loss of power in the right upper extremity was absolute, while in the lower extremity, same side, it was nearly complete. At this time Dr. Holt, to whom I related the history of the case, suggested a polioencephalitis of Strümpel.

February 9th, fifth day.—I observed, for the first time, that the right face was paralyzed. He was unable to close the eye, could take food fairly well, was perfectly conscious, understood what was said to him, but was still unable to utter a word. The loss of power in the right lower extremity was now complete, and the same slight spasm on this side was reported as having occurred during the night. He had a movement of the bowels to-day for the first time in three days. Constipation had been a marked symptom from the beginning. The temperature still had not risen above 101°. The quinine had been discontinued a day or two ago, and his diet was now milk and bread, which he took quite ravenously.

February 10th, sixth day.—At noon to-day his temperature went up to 105°, and while it was thus elevated convulsive movements of a clonic nature affected the whole of the right side, face included. He was conscious during the whole attack. I administered fifteen grains of antipyrin by the mouth, and at the end of forty-five minutes, the temperature remaining unaffected, I employed the bath, at a temperature of 95°, and in half an hour the thermometer in the rectum registered 103°. The hemispasm subsided in the meantime, and at 10 P.M. of the same day Dr. Holt visited the patient for me, and reported as follows: Temperature, 104°; respiration, 24; pulse, 160; heart and lungs examined with negative results; opens mouth easily, but does not protrude the tongue; hemiplegia complete and hemianæsthesia quite marked; abdomen not retracted and quite natural; pupils equal in size, and respond well to light—normal, in fact; no strabismus; resting quietly; ordered potassium bromide, gr. xv., every two hours. Dr. Putzel saw the case at 5 P.M., but I did not get his report.

February 11th, seventh day.—I found him resting quietly; his temperature seemed normal and was not taken. At 6 P.M. I found the temperature 105°, and at 6.30 administered eighteen grains of antipyrin with eight grains of chloral. At 10 P.M. the temperature was 100.4°. The chloral was given because of hemispasm.

[1] Read before the Practitioners' Society, of New York, October 1, 1886.

I did not see him on the 12th, but he was reported to me as "doing well."

February 13th, ninth day.—There was nothing noted, save that his bowels were now moving regularly and naturally, and that the temperature had not reached 102°. On this day Dr. M. A. Starr, at my request, visited the patient, and reported to me his diagnosis as acute polioencephalitis.

February 14th, tenth day.—He was able to protrude the tongue to the margin of the lips, and the temperature was, for the first time, normal. The blistered surface at the nape had not healed, and was excessively irritating to the boy.

From this date to the 27th nothing of interest occurred. The temperature ranged from 98.8° to 102°, the curve being very irregular. On this date (27th) it was observed that he could protrude the tongue quite easily and to the full extent, and that the facial paralysis had nearly disappeared. He was still unable to talk, but made his wants known by very intelligible signs. He still takes the bromide of potassium and the slight attacks of hemispasm rarely occur.

March 9th.—I note that he is quite cheerful, but is still not talking. There is marked contraction of the fingers into the palm and of the flexors of the forearm. He can move the fingers a little, and there is still a trace of the facial paralysis. The patella tendon reflex on the right side is notably exalted and there is a slight foot clonus. The bromide is discontinued and he is ordered potassium iodide in fifteen-grain doses, three times a day. The change in medicine was not made until the 11th, however, and on the 13th it was reported to me that he was able to raise the arm from the side over a small arc, that he managed to creep across the floor, and that he said, "Mamma," "Nana," and "Mary Ann," quite distinctly. The iodide was soon pushed to half-drachm doses three times a day, and continued until the middle of June, when it was discontinued without my sanction.[1]

Dr. Holt's Case.—Andrew L——, aged four years, came under observation April 7, 1884, for a paralysis affecting the right side of the body. The following facts were gained of his history: An older brother has epilepsy. The patient had always been well until attacked by measles in the preceding January. About one month after this he was taken with severe acute symptoms lasting two weeks. During this time he had frequent vomiting, constipated bowels, and moderate fever. There was no delirium. At the end of this time, suddenly, while in bed one morning, he had convulsive movements confined to face, followed by complete right hemiplegia, face and leg being involved, and aphasia. There has been gradual improvement in the paralysis, most marked in the face and least marked in the arm. For a month he has walked alone.

Examination: General condition good. Face slightly drawn to left side when active. There is quite marked atrophy of the right upper extremity, especially in the shoulder muscles. Measurement gives three-fourths of an inch difference in the two sides over the deltoid, and one-half inch in both the arm and forearm. Cannot raise the arm beyond the shoulder; flexes and extends the forearm feebly; can scarcely move the fingers at all. There is marked drop-wrist; the flexor tendons are strongly contracted; the first row of phalanges is extended, and the second and third flexed; thumb flexed and adducted into the palm. Gait like that of a typical hemiplegic. Pretty good power in thigh muscles; those of leg are very weak; foot held in equinus with a rigid tendo achillis, which can be overcome by passive force; atrophy of thigh and calf one-fourth of an inch. Sensibility is normal.

Electrical reaction: There are good responses in all the muscles to a moderately strong faradic current. During electrization he cries out, "I don't want it," being the first words he has spoken since the attack, except "papa" and "mamma." No evidence of cardiac disease and no history of rheumatism.

A splint was applied to overcome the contraction of the muscles of the hand, and faradism was used faithfully three times a week for about two months without any apparent benefit.

The case then passed from my observation, and I did not see it again until March 11, 1885, when the boy was brought to me for epileptic attacks that began in January, but of late had grown more frequent until they were repeated six and seven times a week. They were described by the mother as follows: At first tonic, then clonic spasm, loss of consciousness for four or five minutes, no cry or biting of tongue.

His speech is steadily improved since last note. He can make his wants known quite easily. There has been little, if any, improvement in the arm or leg. Hand falls in drop-wrist, and neither it nor the fingers can be extended. Cannot clear the floor with toe in walking. Measurements show three-fourths inch atrophy of the arm, one-half inch of forearm, and one-half inch each of thigh and calf. He seems rather weak-minded.

He was ordered bromide of potash in full doses (gr. lxxv. a day, but rarely received more than gr. xlv. or lx). This was continued for two weeks, with the effect of controlling the epileptiform seizures.

He then became drowsy, gait at first unsteady, and later he was unable to walk at all. Complained of constant headache and was constipated. His respirations were at times quite irregular; temperature slightly elevated, usually about 99½°; pulse, 120; pupils dilated, tongue dry and brown. These symptoms passed away in about a week, with no treatment except moderate doses of the iodide of potash. The bromide was stopped when they were first observed. It did not seem that they were wholly due to the drug.

After this time the bromide was given irregularly, and in a month or so the seizures returned, though not with the original frequency.

March 8, 1886.—Patient was seen this date. Has had no treatment for a long time. The epileptic attacks continue at short intervals. The facial paralysis seems entirely gone. He walks firmly, though with very marked limp; uses the hand very little. There is now, however, no contraction. Speech improves slowly; while hardly feeble-minded, he is yet much below the other children in intelligence.

Strümpel read a paper before a meeting of the German scientists and physicians in September, 1884, describing a lesion of the brain analogous to poliomyelitis. The name he gave was polioencephalitis, and his cases corresponded closely with the cases whose histories I have detailed this evening. His paper was published in the *Jahrbuch für Kinderheilkunde*, vol. xxii., 1884.

On discussing my own case with some neurological friends, they have questioned the accuracy and the reliability of Strümpel's observations, or, rather, they have been unwilling to accept his conclusions.

Recently A. Wallenberg, in the *Jahrbuch für Kinderheilkunde*, vol. xxiv., 1886, pp. 384 *et seq.*, has published a valuable paper on "Cerebral Paralysis in Children," and has tabulated one hundred and sixty cases drawn from various sources. It was not possible to draw a sharp line of distinction between the congenital and acquired forms.

In eighty-seven cases no cause could be found. Asphyxia was regarded by Wuillemeier as a cause in the congenital spastic cases, six in number, though an investigation was not made even in these as to whether there was any meningeal or cerebral hemorrhage.

Among the causes given are: Traumatism in 8, syphilis in 2, the exanthemata in 21, endocarditis and secondary emboli in 5, diphtheria and croup in 3, cerebro-spinal meningitis in 6, some of which were very doubtful; pertussis in 3, and typhoid fever in 4 cases.

[1] The diagnosis I had finally reached was acute encephalitis.

As to *age*, 19 were developed at the time of birth, and were really congenital. Eighty-one cases occurred between the first and third years, distributed as follows: thirty-five in the first year, 29 in the second year, and 17 in the third.

Nine developed during the fourth year and the same number in the fifth, 13 in the sixth, 17 between the seventh and tenth years, and 12 after ten years of age.

It will be seen, then, that 60, less than one-half of the whole number, occurred in children over four years of age.

The sexes were about equally represented.

An analysis of the clinical histories gives *convulsions* as the initial symptoms in a great majority of cases. The invasion, too, was quite abrupt. In about one-half of these convulsive cases hemiplegia followed soon after the attack. Many die in this first stage.

The second stage is the stage of *paralysis*, the symptoms of the first passing off in a few days. Monoplegia is rare; the face frequently escapes, while the arm is generally the most seriously impaired. In the early part of this second stage the muscles are flaccid, and later they become rigid.

The tendon reflex at first is normal, later it is exaggerated.

In sixty cases *contracture* and post-hemiplegic movements were observed. Charcot regards these as depending on secondary descending degeneration.

Particular stress is laid by Wallenberg on the position of the arm when affected by these secondary contractures. The forearm is flexed and pronated, while the hand is flexed and drawn to the ulnar side. The fingers are flexed at the metacarpo-phalangeal articulation, while the rest of the phalanges are generally extended. The thumb is drawn into the palm, but is seldom extended. The lower extremity is not so severely affected, and is the sooner to recover. Sometimes the recovery is almost complete. When the foot is contractured the position is that of equino-varus.

Förster states that *atrophy* is especially noticed in the forearm and calf after a few weeks. Seeligmüller does not look for this until months have elapsed.

The *electrical reactions*, both to the galvanic and the faradic current, are normal. There is never any reaction of degeneration.

The *sensation* was diminished in nineteen cases on the paralyzed side, and the anæsthesia was more marked the more recent the paralysis. Later, it disappears.

In three cases the hearing on the side paralyzed was impaired, and in nine the sight was affected.

There was often increased tendon reflex in the sound limb as well. This was probably due to secondary degeneration.

Aphasia, according to Bernhardt, was observed in almost all the recent cases. This was thought to be generally motor. Of course no observation could be made in children not old enough to talk.

Wallenberg's statistics show right-sided paralysis in ninety-five cases, in forty-five of which aphasia or some disturbance of speech was observed. The greater number of these recovered speech.

Of sixty-six left-sided cases, anomalies of speech were noticed in seventeen. In only a few cases was there any impairment in *intelligence* connected with disturbed speech. The rule is, however, that the memory remains weak, and the children seemed backward in mental development. In some cases this increased to actual idiocy. In fifty cases it is stated that intelligence was affected before, or independent of, epilepsy.

In the congenital cases, or in those occurring in the first year, *flattening of the skull* on the affected side was observed. This is certainly an interesting observation, especially as it was absent in those developing after the first year.

Motor disturbance.—A large percentage of the cases showed, sooner or later, irregular movements, like athetosis. Twenty-seven cases presented hemiathetosis. In seven hemichorea was a late development.

Epilepsy developed in sixty-six of the whole number, and generally one year after the attack. Wuillemeier states that the seizures grow less frequent ten or twenty years later. With the epilepsy there is frequently associated idiocy and other grave disturbance of brain substance. This epilepsy belongs to the class of "cortical epilepsy" in the sense that the movements extend from one limb to the other.

Pathology.—Forty-eight autopsies, mostly from Goudard's Thesis, Geneva, 1884, were collected, but the larger number were made years after the attack.

There were twelve, however, in which death occurred soon after the attack, and these showed: Embolism of sylvian artery (mid cerebral) in four cases; a similar condition was found in three, *i.e.*, the conditions found in heart and other organs rendered the embolism theory highly probable. The source of the embolus was found in the heart in six cases. In one case there was thrombus of the pulmonary vein.

In the remaining five of the recent cases there was found hemorrhage into the substance of the hemisphere and into the ventricles.

In no single instance was inflammation found in the gray substance as an independent lesion.

The next thirteen cases showed secondary changes in the form of atrophy and sclerosis. In nearly all could be demonstrated a primary focus, as cyst or apoplectic cicatrix. In most of these it was probable that the hemorrhage or embolus had caused the paralysis. In only three of these thirteen was there evidence of pre-existing meningo-encephalitis in thes hape of thickening and adhesions of the meninges, with spots of softening and parencephalic defects in the gray substance. It could not be determined whether the meningitis or the encephalitis was the primary lesion.

In the third series of autopsies, fourteen in number, the original focus of disease was not clearly defined, but affected mostly the central convolutions and motor areas of cortex and cord. Just what the original nature of the process was could only be inferred. In some, encephalitis appeared more probable than hemorrhage. All the foregoing cases were connected with the exanthemata, trauma, difficult labor, or hereditary condition.

In the next nine autopsies there appeared a uniform atrophy of the hemisphere without especial localization about a focus. If such existed, it was found in the motor fibres and ganglia in the track of a descending degeneration of the pyramids. In all the cases where a long time had elapsed after the attack, there was found atrophy of the affected hemisphere, associated with sclerosis, and to this was added, in varying degrees, atrophy and sclerosis of the pyramidal tracts.

The conclusions that Wallenberg draws from this analysis are:

First.—Strümpel's clinical description does not depend on a special localization in the gray cortex of the cerebrum, but is seen in all cases in which a more or less sudden lesion occurs in the motor tract between the cortex and the medulla.

Second.—The lesion is frequently emboli, hemorrhage or thrombus, and can also be caused by meningitis and encephalitis. All these causes have this in common, viz.: that they lead to atrophy and thickening of all the elements of the brain. In this atrophy the motor region most frequently participates, but is seldom exclusively so affected.

Third.—The name, polioencephalitis must be discarded, as there is no single anatomical lesion at the bottom of these cases of cerebral paralysis in children.

CANCER POWDER.—The following powder is said to kill the fetor of cancerous ulcers, and to stop the pain: ℞. Iodoform, 18 grammes; quiniæ sulph., 3 grammes; essence of mint, 40 drops; charcoal, 15 grammes. To be dusted over the ulcer daily.

SOME CONSIDERATIONS ON HYSTERIA.

By MARY PUTNAM-JACOBI, M.D.,

NEW YORK

(Continued from page 374.)

The following case illustrates the mode of development of these cerebral paræsthesias, in a way all the more interesting because it is analogous and not identical with cases previously quoted.

Case XIXa.—Boy, aged twelve; mother anæmic and hysterical, father healthy. Said to have suffered during five years from headache; become most intolerable during last two years, worse in the morning. Head seems to patient to be very large, hollow, affected with constant, diffused, dull pain; this frequently exasperated into violent paroxysms. During last year has great disinclination to walk; feels as if he would fall, becomes exhausted, often with increased pain in head; will stand and hold on to a railing. Was seen by several eminent physicians, being under the care of one excellent neurologist for two years with little benefit. Finally the mother consulted a surgeon, who discovered a phimosis and operated. The boy suffered from violent nervous agitation and headache for ten days, then recovered. The inability to walk was entirely relieved; the headaches markedly so, with progressive improvement.

In predisposed persons depressing moral emotions may suffice to induce headache of several years' duration.

Case XX. and Case XXI. were both extremely anæmic young women. In each, after severe moral strain associated with disappointment in marriage, almost constant headache; most severe at the occiput, frequently exaggerated into the most violent paroxysms. In one case these headaches lasted seven years; in the other, four or five; yielding to no remedy, but finally to time.

The generation of hallucinations of pain in cortical centres, like the hallucinations of visional and auditory centres in insanity, in the entire absence of alteration at the periphery or root of nerves, would imply that the ordinary impressions which passed upward from peripheric nerve-terminations were registered in excess, on account of the hyperexcitability of the registering apparatus. In a photographic apparatus, rays of light of the same intensity produce chemical decompositions which vary in amount (depth) according to the chemical preparation of the receiving plate, *i.e.*, according to its sensitiveness. This may represent one analogy. The hallucinations of insanity furnish, by another analogy, indications of the truth of the proposition maintained earlier in this paper, namely, that excitability of the sensory centres is increased in proportion as the functional activity of other portions of the brain is depressed or inhibited.

Hysterical pains are cerebral hallucinations.

Visual hallucinations are by no means uncommon in hysteria. Dr. Hammond has referred visual hallucinations to disease of the thalamus, and thinks that they are precursors of a special form of epilepsy, called by the author "thalamic." The numerous connections of the thalamus with the optic tract[1] render extremely plausible the suggestion that a morbid process in this ganglionic mass may generate impressions which shall be referred by the optic tract to the retina. Of such impressions, however, the cortical visual centres must, since they rise into consciousness, be the spectator and registrar. Further, the hallucination is composed of elements drawn from memory, *i.e.*, from secondary impressions previously registered in the cortex. It is certain, therefore, that the cortex is involved in the disorder, even if its original starting-point be in the thalamus. It seems more probable that the morbid impression is thus first carried by fibres of the optic tract to the cortical visual centre in the cuneus,[2] thence "referred" by the usual mechanism of illusion[1] to the retina and outside world. Apart from the coexistence of sequence of epileptic convulsions—or else of proof of organic disease of the thalamus—there is, however, no proof that visual hallucinations originate in it rather than in the visual centres themselves.

Visual hallucinations.

The two following cases illustrate the effect of a prolonged excess of sensory impressions conveyed through upper nerve-tracts to the brain-centres:

Case XXIV.—Aged thirty-four. From fifteen to twenty-eight engaged in excessive playing on the piano as accompanist to singing-teacher, sometimes ten to twelve hours a day. Six years ago begun to suffer with nervous diarrhœa, and this lasted a year; still liable to attacks of it. Five years ago began to have distress in nape of neck, and after a month, while playing on the piano, arms suddenly "gave out." The patient was "prostrated" in bed for two months, and has never since been able to touch the piano. Even the placing of the fingers on the keys—or on a table in the attitude of playing—causes sensation of nausea, and of distress at nape of neck. The same is caused by touching fingertips, which are excessively sensitive. There is no pain in track of the nerves; the morbid response to touch is felt immediately near the roots of the cervico-brachial plexus. There are often sensations of numbness in the right arm, and occasional pains. The act of turning the head or lifting the eyes causes nausea, and even "great anguish." When the nape of the neck is supported, the patient feels "perfectly comfortable." The head is the seat of many distressing sensations, though rarely of distinct pain. It sometimes seems enormously big, sometimes perfectly empty (sensations analogous to effect of cannabis indica). Inability for mental exertion marked.

On one occasion patient had been to the Catskills, and had immediately begun to suffer from "frightful dizziness," and was obliged to leave. On another occasion, at the Clifton Water Cure, had attack of incomplete paraplegia. This was cured by the Swedish movement treatment. During the five years that the patient had been more or less subject to these symptoms there had been many intervals of comparative health, but never of complete recovery.

This case approximated to the great class of functional neuroses which usually express themselves in localized convulsions on the attempt to execute certain co-ordinated movements. There were no convulsions, however, and very little pain; apparently no psychic symptoms, except the inability for mental exertion. The attack of paraplegia was characteristically hysterical.

The etiology of this morbid state in an excess of function demanding complex muscular co-ordination, together with the predominance of symptoms of nausea and vertigo, and the degree of relief afforded when the back of the head was supported, all point to functional exhaustion—exhaustion of power to store force—of the co-ordinating mechanisms of the cerebellum, probably associated with a similar condition of the thalamus through the medium of the recurving fibres passing between thalamus and cerebellum, through the tegmentum and pons. The cortex of the cerebrum was only occasionally, and secondarily, involved; and, correlatively, hysterical symptoms proper were few and transitory; there was but a slight degree of mental inhibition; no noticeable psychic pain, but, however, an attack of paraplegia. The case is quoted here, not as an example of hysteria, but of a morbid state lying on the border-line of hysteria, but distinct from it.

Case XXV.—This case has already been mentioned while speaking of hysterical amblyopia. It has just been related in full by Dr. Osgood Mason.[2] A large train of neurotic symptoms, which, after fifteen years, finally culminated in incoercible vomiting and death by inanition, were caused by a neuritis of the median and musculo-spiral nerve. The neuritis was due to a splinter

[1] Through the posterior fasciculus, the pulvinar, and the corpus geniculatus externus.

[2] Exner, loc. cit.—Seguin. Journal of Nervous Diseases, January, 1886.

[1] Whatever that may be.

[2] Am. J. Med. Sciences, July, 1886.

run into the palm of the hand at the age of two and a-half years, and not removed until the age of twenty-two, when the first symptoms of neuritis developed after a blow on the hand in which the splinter was embedded. The patient was operated upon several times,[1] by section of the median nerve for the intense pain in the arm, and recovered from this; so, indeed, that between 1878 and 1885, the date of her death, she had no local suffering. But, as the autopsy showed, the neuritis continued to progress in the central segment of the divided nerve; the patient suffered from several severe attacks of pain in the neck in the course of the cervical plexus, but much more frequently from violent headaches and a series of disturbances which, as quoted from me in Dr. Mason's paper, I have thus classified:

First period.—Mental depression, with religious excitement, followed by severe facial acne. Duration, four months.

Second period.—Utero-ovarian congestion, followed by retroversion, ovarian prolapse; then recovery after eighteen months.

Third period.—After three months' good health, attack of pseudo-meningitis, with violent headache, vomiting, profound prostration, retraction head, rigidity cervical muscles, intense vertigo, amblyopia, dilatation and insensibility of pupils, absence fever. Duration, eight weeks.

Fourth period.—Headache, with localized tenderness of scalp, some local rise of temperature at same spot, sensations of bursting in head, nausea, stumbling gait, heaviness in limbs. Relieved by cauterization of head; then by iodide sodium.

Fifth period.—Severe nervous dyspepsia; relieved by faradization.

Sixth period.—Mental depression approaching to melancholia.

Seventh period.—Increase of dyspepsia, alternating with headache, vertigo, and prostration, and once transitory diabetes; finally, the attack of violent dyspepsia in which the patient lost her life.

The autopsy was completely negative of result, except as regards the nerves in the brachial plexus. Signs of neuritis were found high up in the plexus, in the musculo-spiral and median nerve; but nothing in cord, medulla, or brain. The violent, long-continued, and finally fatal disturbance of the central nervous system was therefore purely functional.

The phenomena of the disturbance were fourfold: 1. Mental (frequent attacks of mental depression bordering on melancholia, and which the patient distinguished readily from the "normal" effects of her prolonged sufferings).

2. Vaso-motor (expressed by the transient utero-ovarian congestion, the purple redness of face attending the pachymeningitic form of headache, possibly also by the severe acne).

3. Sensory (violent headaches, attacks of numbness in limbs, attack of amblyopia).

4. Visceral (gastric attacks, which, once begun, increased in frequency, duration, and intensity until the fatal issue).

Dr. Mason quotes me as ascribing all these phenomena to a series of vaso-motor neuroses. I should to-day look for the fundamental conditions in the brain-cortex, so long the recipient of masses of irritating impressions coming from the diseased nerves.

When, after division of the nerves, these impressions could no longer be referred to their peripheric termination, they diffused into the cortical areas of the trigeminal and occipital nerves, causing the violent headaches referred to their termination in the dura and scalp. As a consequence of this excitation of the sensory centres, followed various degrees of cerebral inhibition. When this inhibition was generalized, the patient suffered from psychic pain. When the inhibition especially affected the visual centre, the patient had the attack of amblyopia coinciding with the most intense mental and motor prostration.

When the cortex was inhibited in the rest of its functional activities, its inhibiting control over the subcortical vaso-motor centres was proportionally weakened, a condition which left these centres to an exaggerated activity.

Stimulation of the vaso-motor centre is a known physiological result of sudden irritations of sensory nerves, and may be inferred to have existed during at least the exacerbations of the neuritis. The symptomatology of the case contained nothing positively indicative of exaggerated vaso-motor tonus. There were, however, many symptoms only explicable by vaso-motor paresis, which rarely comes on except as a consequence of previous excess of tonus.

The final illness, comprised of visceral symptoms, was evidently a neurosis of the pneumogastric. Preceded as it was by the attack of diabetes, it indicated an affection of the medulla, which we may most plausibly, however obscurely, associate with the long-standing sensory irritation of the medullary vaso-motor centre.

It is the theory of Meynert, in regard to vaso-motor excitation from withdrawal of the control normally exercised by the cortex of the brain, which explains hysterical vaso-motor neuroses as none other can. By it these neuroses are linked with the same fundamental conditions as underlie the sensory, motor, and psychic phenomena of hysteria.

Upon this theory (which has been already exposed), and in view of the many facts which justify the localization of hysteria in the brain, the vaso-motor neuroses of the disease might properly be called negative, because due to the withdrawal of the control over vaso-motor centres which should normally be exercised by the cortex. Positive vaso-motor neuroses, on the other hand, are those which are caused by excitation of vaso-motor centres through irritation of sensory nerves. These may be present in hysterical people, but are not the typically hysterical phenomena as are the others.

Vaso-motor neuroses of hysteria.

The irritability of the vaso-motor system in hysterics is indicated by an immense number of symptoms, among which "cold chills" and cold hands and feet, perhaps alternating with flushing and sweating,[1] are very frequent.

There are three other and more debatable phenomena observable in hysterics—the first occasionally, the other two very frequently—that I think may be also referred to the vaso-motor neuroses. The first of these is transient albuminuria.

Studies upon the albuminuria of fever, initiated by Cohnheim and ingeniously pursued by Mendelsohn,[2] have indicated that the initial event in this morbid process is irritation of the vaso-motor nerves of the renal plexus. In fever, the kidney, as measured by Ray's oncometer, was found to shrink in bulk coincidently with the appearance of the albuminuria. The shrinkage implied diminished blood-supply, which could only be attributed to contraction of the arterioles under the influence of vaso-motor irritation. With this fall of the arterial current and diminished supply of arterial blood, there would be a fall of arterial tension, consequently rise of venous tension, venous hyperæmia, venous malnutrition of the epithelium of the glomeruli, hence albuminuria, as a result of its anoxæmia and perverted action.

Albuminuria from vaso-motor irritation.

If such a train of sequences can be determined by the vaso-motor irritations of fever, it can be so also by others, including those of hysteria.[3]

[1] Once by Dr. Sapolini, of Naples; three times by Dr. Weir Mitchell, of Philadelphia, or rather in consultation with him and by his advice.

[1] To which Beard has given a special sexual significance.

[2] Prize Essay, Alumni College of Physicians and Surgeons, American Journal of the Medical Sciences, vol. xviii.

[3] Or of lithæmia, as suggested by Dr. Kinnicutt, Archives of Medicine, February, 1882.

CASE XXVI.—Delicate young lady. Subject to sick headaches, associated with gastric catarrh. The latter was being treated successfully by washing of the stomach, when a severe hysterical attack occurred, with much purely symptomatic emotional disturbance. Urine examined during this attack exhibited a trace of albumen; the tension of the radial pulse was high. Pilocarpine was given, and in twenty-four hours the albumen had disappeared, not to return. It had never been noticed before.

CASE XXVII.—Extremely fragile and anæmic girl, with some endometritis and numerous neurotic symptoms, that, however, did not prevent her from engaging in steady work at a Government clerkship. On several occasions albumen appeared in the urine, without a trace of microscopical alteration. A physician diagnosed nephritis and prescribed a vegetable diet, upon which patient did not improve. On one occasion, while on this diet, I found considerable albumen, but nevertheless prescribed a meat diet. Two days later all trace of albumen had disappeared.

These discoveries in regard to vaso-motor irritation of the kidney suggest, by analogy, a vaso-motor explanation for the celebrated phenomenon, ovarian hyperæsthesia. It is certainly not at all impossible that the seat of this phenomenon, as of the extraordinary pelvic paræsthesias which may coincide with it, is in the cortex of the brain, at the final terminus of the centripetal fibres carried in the utero-ovarian nerve. But all of the fibres of the ovarian nerve whose termination has, so far, been traced pass to blood-vessels. These fibres must have vaso-motor functions, hence be centrifugal in direction, although there are, doubtless, others centripetal and endowed with functions of common sensibility. The facility of vaso-motor irritation in the ovary is obvious. May we assume, at least provisionally, that the vaso-motor nerves of the ovary are habitually controlled by those cortical areas in which the centripetal fibres of the utero-ovarian nerve terminate? Loss of inhibiting power in these areas would be felt as vaso-motor excitation at the point of peripheric origin of that nerve; that is, as spasm of the arterioles of the ovary. The result of such spasm is a diminution in the amount of normal blood sent to the ovary.

Ovarian hyperæsthesia by vaso-motor irritation?

Diminution of the arterial blood-supply causes dyspnœa of nerve-elements so exquisitely dependent upon oxygen; this, with or without consequent venous hyperæmia, must become a source of irritation to the ovarian nerve. This ovarian irritation has been rendered classical by Charcot, as a characteristic "stigma" of hysteria. It undoubtedly often exists in the absence of all appreciable lesion of the pelvic organs. But the pain and the diffused paræsthesias—the feelings of swelling, burning, etc.—do not differ in form from those which coincide with enlargement and prolapse of the ovary, with endometritis or displacement of the uterus. Such lesions, indeed, can only be excluded after a scrupulous local examination. As this was omitted in all of Richer's cases,[1] it is quite impossible to tell from the histories how far the symptoms were purely hysterical, how far the hysteria was symptomatic of utero-ovarian disease.

The third symptom to be considered in this connection is amenorrhœa. The discovery of the vascular wave in arteries, which has suggested so many fruitful considerations in regard to the arteries of the brain, may be applied to those of the uterus also. It is such a peristaltic wave that should propel blood through the uterus toward the endometrium during the menstrual hemorrhage. Vaso-motor irritation interfering with the regularity of this wave may determine cramps of the uterine muscle—hence dysmenorrhœa in the absence of uterine lesion—and is probably the *immediate* cause of such pain even when organic lesion exists, and is the ultimate cause of the vaso-motor irritation. In the highest degree of such irritation spasmodic closure of the arteries would arrest the flow and cause amenorrhœa. With an exaggeration of the peristaltic wave, which may be compared to the exaggerated peristalsis of the intestine which causes certain forms of nervous diarrhœa, there should be menorrhagia. Tait's ovarian menorrhagia is probably of this description, and the multiplication of follicles on the surface of the ovary observed after it has existed would be the consequence, and not the cause, of the hyperæmia. These two opposite conditions—amenorrhœa and menorrhagia—are mentioned here because both are so extremely common in all grades of hysteria, and because both, by the theory of the vascular wave, are traceable to derangements in the vaso-motor apparatus of the utero-ovarian system. Either the entire series of vaso-motor centres, or, more especially, that located in the lumbar cord is at fault.

Amenorrhœa by vaso-motor irritation.

The over-excitability of such vaso-motor centres, which, on this theory, should exist in many cases of amenorrhœa, would be explained by Meynert's theory of loss of control over them when the activity of the brain-cortex was enfeebled. Thus would be explained the frequency of amenorrhœa in hysteria and in melancholia, where it is, indeed, the rule, and is associated with many other signs of vaso-motor disturbance. Kraft Ebing enumerates tendency to amenorrhœa among the signs of the neurotic constitution which constitutes the predisposition to insanity.[1]

CASE XXVIII.—Girl, nineteen years of age. Subject to periods of amenorrhœa, lasting six months at a time. As soon as the amenorrhœa begun patient fell into a state of mild melancholia, which lasted until menstruation returned. During three years the menstruation, once arrested, did not return, except under the influence of a sea voyage, which after a while was regularly resorted to.

The melancholia was attributed by a distinguished gynecologist to the amenorrhœa. It is much more probable that the amenorrhœa resulted from negative vaso-motor excitation, due to loss of cortical control through hysterical cortical inhibition, the latter being the immediate cause of the psychic symptoms.

CASE XXIX.—Girl, aged twenty-two, who until twenty only menstruated once or twice a year, and had been the subject of several hysterical disorders. The last was an hysterical arthralgia, which confined her to her room for an entire year. During this time, however, the patient was, apart from the arthralgia, perfectly well, free from headaches, and menstruated regularly. A few months after recovery from the arthralgia she received news while menstruating which caused a severe shock and moral distress. The flow was at once arrested, and the patient begun to suffer from rather severe pain in the left ovarian region. Two or three weeks later the uterus was found retroverted, the left ovary accessible and tender. The physician consulted replaced the uterus and applied ice over the ovarian region, with a view of lessening ovarian congestion and thus restoring the menstrual flow. The theory of the treatment was erroneous, and the treatment certainly unsuccessful, for the amenorrhœa persisted for a year, accompanied by almost entire inability to walk. Menstruation finally returned after a visit to Franzenbad. The ovarian hyperæsthesia and pain on walking persisted for three years longer, then the patient entirely recovered.

Recovery in such cases, as well as the previous occurrence of regular menstruation, proves that the amenorrhœa cannot be due to arypoplasia, or defective development of the aorta or pelvic arteries. In another place[2] I have endeavored to set forth a special view of menstruation, which claims that the blood lost in the menstrual hemorrhage is determined to the pelvis by the rhythmic growth of the great utero-ovarian plexuses in which it accumulates. This view is

Comparison with theory of menstruation.

[1] Recherches sur l'Hystero-epilepsie, 1884.

[1] Psychiatrie, Bd. i.

[2] American Journal of Obstetrics, 1885, 1886.

not, however, at all incompatible with such a function of the uterine arteries as has here been suggested in the discussion of their peristaltic wave. For, while the accumulation of blood in the peri-uterine veins is the necessary preliminary, as I have claimed, to its evacuation on the free surface of the uterus, a rise of tension in the uterine arteries has been shown to be necessary to initiate the flow through the rupture of endometrial capillaries (Leopold). A rise of arterial tension has been demonstrated to precede menstruation, first, I believe, by myself, but afterward by a pupil of Hegar's, Reine,[1] and by Fancourt Barnes, of England. In such an increase of tension, in which, nevertheless, normal rhythm was preserved, it is probable that a peristaltic vascular wave would be intensified, and blood aspired more abundantly to the uterine arterioles at the same moment that it had reached its maximum of accumulation in the peri-uterine veins.

I think the hysterical character of at least many cases of amenorrhœa is often overlooked. I have myself often mistaken it, until the prolonged observation of the patient has detected the successive evolution of many undoubted hysterical symptoms. It then becomes clear that the amenorrhœa is itself an hysterical neurosis. It is putting the cart before the horse to think that these symptoms are the *consequence* of the amenorrhœa. As well say that acute melancholia was such a consequence; and, indeed, gynecologists are not infrequently guilty of the latter absurdity. The pathogeny of the cases in question, moreover, is made very clear by the fact that hysterical symptoms may be discovered, if looked for, in the history preceding the amenorrhœa as well as in that following it.

It is not claimed here that the vaso-motor spasm which is suggested to explain the absence of the menstrual flow, and consequent arrest of other menstrual processes, is necessarily the only disorder at the basis of the amenorrhœa. There may be some direct influence of the nervous system upon the processes of reproductive growth at the endometrium, ovaries, and plexuses. But of such direct influence of the brain upon growth there is at present much less known than of its indirect influence through the induction of vaso-motor spasm, and the latter explains the phenomena. The numerous vaso-motor or sympathetic nerve disorders which accompany hysterical amenorrhœa, and which are absent in purely anæmic or cachectic amenorrhœa, are not consequent upon, but coincident with, the disordered uterine function. They are the common expression of the same fundamental cause.

Case XXX.—Unmarried woman, aged twenty-six. Began to suffer from dyspepsia, and simultaneously to exhibit profound depression of spirits and hypochondriacal preoccupation about her health. While at Salisbury's Health Establishment, following rigid diet for dyspepsia, menstruation ceased, and remained absent for two years. Persistence of dyspepsia, very severe for eighteen months, then relieved considerably by diet and stomach-washing. Then treatment by health-lift, and soon improvement in dyspepsia. In two months menstruation returned; coincidently dyspepsia disappeared, patient felt quite well, and able to eat ordinary diet. A month later symptoms of approaching menstruation occurred, but there was a delay of a day or two in flow. A single local application of galvanism (made to cavity of cervix) was followed on same day by flow. Previous to use of the health-lift, electrical applications had caused nausea without the slightest effect upon menstrual symptoms.

Case XXXI.—Well-developed young woman, aged twenty-five. No appearance of anæmia, but to hæmitametre blood-corpuscles always below four million; hæmoglobine, sixty per cent. Menstruation always irregular, often at intervals of six months, finally of an entire year. During seven years almost constant suffering from headaches of all description. For a year, ovarian hyperæsthesia, aggravated by walking. Numbness and inability to use arms. Often inability to use eyes in reading, etc., for several weeks at a time, though eyes quite free from organic defect. Inability for mental exertion; frequent attacks of mental depression. Finally return of menstruation—four times in eight months—under combined influence of change of scene and society and use of health-lift. Coincidently headache, much relieved, began to disappear during long intervals; all other symptoms entirely disappeared.

[1] See Volkman's Klinische Sammlung.

Spasmodic tonus or contraction of the unstriped muscular fibre of the blood-vessels has its counterpart in the spasm of other unstriped muscular fibre, which is so common in hysterics. There is the spasm of the œsophagus (globus), of the intestine (cramps), of the uterus (dysmenorrhœa). There is, apart from spasm, the irregular and precipitate peristaltic contractions of the stomach, which result in vomiting; of the intestine, which result in the well-known nervous diarrhœa. It is generally accepted that both the tetanic spasm and the irregular clonic contractions of unstriped muscular fibre imply an excess of nerve-discharges through the sympathetic nerve, when this ceases to be sufficiently inhibited by the cerebro-spinal axis. The splanchnic habitually inhibits the intestine; its paralysis is followed both by exaggerated peristalsis and neuro-paralytic hyperæmia.[1]

Other vaso-motor spasms.

The facility with which diarrhœa follows, in certain persons, upon depressing emotions, indicates that the inhibition of cerebral activities suffices to remove this inhibitory influence of the splanchnic.[2] *Per contra*, it may be inferred that the splanchnic nerve habitually serves to convey inhibitory influences from the brain.

The constipation of hysterics, which is often so remarkably obstinate, could not, consistently with the theory advanced in this paper, be ascribed to an excess of cerebral inhibition such as causes the constipation of organic brain disease. It is more probably associated with deficient secretion on the intestinal mucosa, through deranged vaso-motor innervation. In severe hysteric attacks the stools, when procured, are apt to be singularly hard, dry, and black. Tetanic cramp, associated with flatulence, interferes with peristalsis.

Spasm of accommodation of the eye and spasmodic action of the muscles of the larynx are phenomena which seem to be intermediate between the disorders of other voluntary and of involuntary muscular fibre.

Hysteric aphonia certainly ranks among the hysteric paralyses, and is, in every respect, analogous to those of the limbs. If, as assumed by Delavan,[3] the cortical centre for the inferior laryngeal nerve be near the centres for articulation, it cannot be identified with them. Paralysis of the vocal cords only by exception accompanies aphasia;[4] and sounds, whose varying timbre would imply varying modulated contractions of the laryngeal muscles, can still be emitted when power of distinct articulation is lost. Conversely, in hysterical aphonia the power of articulation with the lips is preserved.

Variations in timbre of the voice are closely associated with the emotions. They vary, also, with the physical modifications of the reproductive organs, and with special mental emotions associated with these.[5] For all these reasons it seems probable that the cortical centre for the inferior laryngeal nerve is more closely connected than the articulating centre with areas for sensory impressions, and especially with the terminal areas for the centripetal fibres of the utero-ovarian nerve. Irritations transmitted in this nerve, or hyper-excitation of its cortical centre,

[1] Nothnagel: Studien über den Darm.

[2] Nothnagel (loc. cit.) comments on the singularity of the circumstance that the large intestine is normally evacuated only once a day. The fact that the typical time for this evacuation is the early morning may indicate that during sleep, when cortical inhibition is reduced to a minimum, the irritability of the intestinal nerves gradually rises until, upon the stimulus of the first meal, peristaltic contractions attain their maximum of power.

[3] On the Cortical Motor Centre for the Larynx, The New York Medical Record, 1885.

[4] It did in Delavan's cases.

[5] Darwin points out that the primary use of the voice in animals is for the attraction of the mate.

might, therefore, be expected to somewhat especially affect the cortical centre for the laryngeal nerve, altogether inhibiting it (hysterical aphonia), or partially so (causing irregular innervation of the laryngeal muscles).

Spasms of ocular accommodation in hysteria.

Spasm of accommodation of the eyes has attracted a great deal of attention lately as a cause of hysterical symptoms, and especially of headache. The neurosis of the motor oculi nerve, upon which such spasm depends, bears a threefold relation to hysteria.

1. It may be due to organic defect of the eye—uncorrected hypermetropia or myopia, astigmatism, etc.—and constitute the intermediate event between such defect and cerebral symptoms.

2. It may be due to a peripheric irritation, and then either coincide with cerebral symptoms simultaneously caused by this or be itself the immediate cause of them.

3. It may be directly caused by the cerebral conditions of hysteria, of which it is at once an expression and an aggravation.

The following case illustrates the second of these conditions:

CASE XXXII.—A girl of eighteen fell on the end of her back, and soon after developed coccyodynia. A year later, this still persisting, began to have intense spasm of the internal recti muscles, associated with visual hallucinations and mental excitability of undefined character. The coccyodynia was cured by galvanism, the spasms of accommodation treated by appropriate glasses; the hallucinations and mental disturbance then disappeared.

The numerous nuclei of the motor oculi nerve lie in the gray matter surrounding the aqueduct of Sylvius, and beneath the corpora quadrigemina. Through the medium of the latter they are connected with optic nerve-fibres; hence indirectly with the visual centre in the cuneus. The proximity of this to the terminal areas of the fibres in the sensitive fasciculus may render it peculiarly susceptible to centripetal irritations. Thus in Case XXXII. the irritation caused by the blow on the spine, and, later, the permanent irritation of Luschka's ganglion, must have been conveyed to this cortical region; thence to the visual centre, causing the visual disturbances; thence, probably,[1] to the third-nerve nuclei, with the effect of exaggerating nerve discharges to the internal recti muscles.

General consideration of hysteria.

From the foregoing considerations, hysteria appears as one of the most profound and far reaching of all constitutional diseases, or as one of the most serious accidents which can result from utero-ovarian disease or other form of irritation peripheric to the nerve-centres. It is allied to insanity, as being primarily a disease of the fore-brain; and, further, in many of its most peculiar (occasional) symptoms—as amenorrhœa, perversion of fundamental instinct—as that for food, the sexual, and the maternal instinct—in its sensory hallucinations, in the predominance of egotistic consciousness over external perception, in its purposeless excitability, depression of effective force, suspiciousness of others correlative with sense of personal inadequacy, etc. This relationship of hysteria to insanity is perfectly well recognized by alienists, but often overlooked by the general practitioners or specialists under whose eyes hysterical symptoms usually develop. It is also recognized that hysteria may accompany organic brain disease (Seguin), or epilepsy[2] (Gowers), or precede insanity; in such cases indicating the beginnings of cortical degeneration (Gowers). The relations of hysteria to the degeneration of stock are again indicated by its frequent family coincidence with tuberculosis.[3]

Profound as are the roots of hysteria, and although it be often as incurable as insanity accompanied by cortical wasting, though it be often as tenacious as life, or even occasionally fatal, it is, nevertheless, usually the lighter form of the neuroses and degenerations to which it is allied. It is, moreover, not infrequently symptomatic; that is, though the temperament may have pre-existed, the serious symptoms only date from some curable peripheric or moral irritation.

Distinction between hysteria and neurasthenia.

Is there any distinction between hysteria and neurasthenia? A distinction is often made, based upon the sex and temper of the patient. If this be a female, and notably selfish, the case is pronounced hysteria. If a man, or though a woman, amiable and unselfish, the case is called neurasthenia.

It is difficult to see any reason for distinctions on this line; for, as already pointed out, notwithstanding the logical tendencies of the disease toward a most profound self-absorption, these tendencies are entirely resisted in a great many cases, simply because the mass, educated development, and wealth of organized associations in the fore-brain were such that it resisted sensory inhibition sufficiently to maintain, though at expense of much suffering, high moral and mental character.

I think the diagnosis of hysteria rests upon two circumstances: the presence, in the status or in the history of the patient, of psychic symptoms; or the presence of, at a distance from a focus of irritation, symptoms improperly called reflex, and only explicable by the intervention of a cortical arc, either a sensory motor arc, or one exclusively sensory. Hysterical aphonia or paraplegia illustrate the first; all "irradiated" pains illustrate the second.

Apart from these cases are others in which the symptoms remain entirely within the sphere of the medulla and spinal cord, which are lacking the distinctive fore-brain symptoms of hysteria, which are usually attended with circumstances of exhaustion of the general nutrition, or localized exhaustion of certain nerves, and for which the name neuræsthenia might more justly be reserved.[1]

Treatment of hysteria.

The cardinal point in the treatment of hysteria should be the constant reference to the cerebral nature of the disease. This recommendation has indeed long passed into common parlance, though based on the most approximate estimate of the cerebral influence. That mental impressions and mental shocks were capable of dissipating entire trains of hysterical symptoms has often been pointed out. The inference has too often been drawn that the symptoms were "imaginary" and within the control of the patient, while the fact that the imagination, the consciousness, the very citadel of personal existence, has been invaded by a morbid process cannot fail to threaten paralysis of volition and self-control.

Prophylaxis.

It is in the prophylaxis of hysteria that the widest use may be made of moral impressions, and the most systematic effort made to organize these into the brain as an effective dike against threatened inhibitions. Early in life the ego must be, by habit, "decentralized," until impressions external to the body become as distinct a part of consciousness as those generated within it. Not less important is the cultivated habit of centrifugal impulses to balance the excess of sensibility. Otherwise, though removed from the tyranny of the physical sphere, the organism remains too predominantly under the influence of secondary sensory impressions associated with the motions. When hysteria develops, it implies that the mechanisms associated with the inmost individuality have succumbed to the accidents and calamities of life. The prophylaxis demands the construction of a personality so robust, the accumulation of resources so wealthy, that every misfortune may be resisted until the moment of real death.

Social influences.

In this connection the words of so distinguished a neurologist as Eulenberg carry all the more weight, because dwelling on facts whose significance seems to be so little recognized among his own countrymen. "The predominance of hysteria among women," he says, "depends, ultimately, far more upon the social

[1] At the posterior part of the thalamus and internal capsule, turning back to the occipital lobes.

[2] Apart from the so-called hystero-epilepsy, or hysteria major. Gowers on Epilepsy, p. 175.

[3] Grasset: Brain, 1884. I have frequently had occasion to note this, or the occurrence of hysteria in phthisical families.

[1] Beard's neurasthenia certainly included hysteria.

conditions to which they are subjected, than upon uterine catarrhs and erosions. These conditions combine to arrest energy of will and independence of thought in women; to suppress impartial comparison of their own indviduality with external objects; to restrain or suspiciously supervise all impulses to free action; and especially to obstruct and oppose any attempt at emancipation from the limits of a narrow and trivial existence. To these circumstances are due precisely the most severe, extended, and incurable cases of hysteria." [1]

(To be continued.)

Clinical Department.

SPONTANEOUS RELIEF OF AN INCARCERATED UMBILICAL HERNIA.

DR. H. L. ELLIS, of Brooklyn, reports the case of a married woman, forty years old, who had an irreducible umbilical hernia, following upon a difficult labor ten years ago. One morning in April last, after having danced all night, wearing a tight corset, she fell to the floor in a faint. She was treated in the usual way, but the corset was not removed until the afternoon of that day. She then began to vomit violently, and was soon seized with sharp, colicky pains in the region of the umbilicus. She took successively Jamaica ginger, Epsom salts, and Brandreth's pills, but these only served to increase the pain and cause renewed vomiting, the character of which soon became decidedly stercoraceous. At the end of five days, during which every attempt to take nourishment was followed by vomiting, Dr. Ellis was called in, and found the hernia the size of a goose-egg, cold and hard, and irreducible. Believing from the apathetic condition of the woman that it was too late to operate, he inserted a long rectal pipe, and cleared out the lower bowel as thoroughly as possible. He ordered a discontinuance of all attempts to give food, allowing only a little ice, and quieted the vomiting by small injections of morphine night and morning. Under this course the patient went on without apparent change for about a week, at the end of which time the contents of the incarcerated intestine began to move, and gradually passed back into the abdomen, the bowels soon moving profusely. Dr. Ellis believes that the incarcerated fecal matter became liquefied by watery secretion, excited within the gut by the irritation to which it had been subjected, and was then washed away.

BALSAM OF COPAIBA IN GONORRHŒAL OPHTHALMIA.

DR. S. HAYNES, of Saranac, N. Y., writes that he was called to see an infant, four days old, who was suffering from conjunctivitis, contracted from the mother, who had gonorrhœa at the time. The inflammation had existed two days, and the cornea was found covered with thick pus, and the eyelids were so swollen that they could be separated with difficulty even when the child was under the influence of chloroform. For several days the remedies used seemed only to hold the disease in check, and the infant meanwhile was rapidly losing flesh. Severe stomatitis was also developed. Applications were now made of balsam of copaiba to the temples, the external surface of the lids, and above the eyebrows, three times a day, a little being occasionally inserted between the lids. The pus was carefully removed every hour by pledgets of cotton, wet with solutions of alum or sulphate of zinc, and fresh butter was applied to the edges of the lids every night. From the commencement of the use of the balsam a marked improvement was noticed, and in three or four weeks the cornea was perfectly clear and free from disease, and the child had gained in flesh. The case had everything against it, as the parents lived six miles away and could be visited only occasionally, the mother was confined to bed for a great part of the time, and the family were ignorant and suffered from the want of many of the necessaries of life. Dr. Haynes states that the use of the balsam of copaiba was suggested by an article which he read some time ago, but he has forgotten both the name of the writer and the medical journal in which the article appeared.

[1] Nervenkrankheiten.

NERVOUS SYMPTOMS FOLLOWING THE USE OF ATROPINE IN EYE DISEASE.

DR. S. HAYNES, of Saranac, N. Y., referring to a case of mania occurring after a cataract operation, reported by Dr. Letcher at the meeting of the Kentucky State Medical Society, relates a case seemingly strengthening the idea that the mania might have been caused by atropine. The patient had suffered from a cataract due to traumatism, and had undergone an operation in Montreal, but without any improvement in the vision. The surgeon had given him some "eye drops," but their use had caused so much local irritation, nervous excitement, and insomnia, that he was compelled to discontinue them. Upon the advice of the surgeon he resumed the drops some time later, but was again obliged to stop on account of the reappearance of the nervous symptoms. Soon after this the patient visited Dr. Haynes, who found total loss of vision in the injured eye, and well-marked symptoms of sympathetic ophthalmitis in the other eye. He advised enucleation, and ordered a solution of atropine for use until such time as enucleation could be performed. The patient reported that this produced the same unpleasant effects as the former application ordered for him by the Montreal surgeon.

ENUCLEATION FOR THE CURE OF SYMPATHETIC OPHTHALMITIS.

DR. S. HAYNES, of Saranac, N. Y., relates the case of a man who had lost the sight of one eye from a traumatism, and was suffering from sympathetic inflammation of the other eye. He advised enucleation, but a surgeon in Montreal, to whom the man applied, counselled against the operation, saying that the injured eye might prove to be the best in the end. In support of the advice then given, Dr. Haynes relates the following case in which he performed enucleation with good results:

"In March, 1876, while Mr. Rell was chopping, a chip flew up and struck him on the eyeball, cutting through the cornea. Severe inflammation set in in the injured eye, and in a short time the other became diseased also. I first saw Mr. Rell in the following July, and advised prompt removal of the injured eye as the only means of saving the other, which was suffering from reflex ophthalmitis. No encouragement from any other treatment was held out. Mr. Rell could not decide on having the eye removed, and insisted on medical treatment first, which was reluctantly given for a month, with no improvement, but constant deterioration of vision, so that it was impossible for him to recognize his nearest friend by the sense of sight. On August 1st his friend called to learn what could be done for Mr. Rell's relief. The opinion given was that nothing short of enucleation of the exciting eye would be of any use, and that at the present advanced stage of the disease it was exceedingly doubtful if this or any other treatment would improve the sight of the sympathizing eye. However, it was our duty to give him this chance. Mr. Rell consented to the operation, which was performed by the writer, assisted by his son, Irving S. Haynes, and nephew, Dr. C. S. Haynes, on August 6, 1876. The operation was a success. The remaining eye began to mend at once, and continued to improve under alterative and tonic treatment, so that in about twelve months Mr. Rell resumed his accustomed occupation, a well man, and with perfectly restored eye-

sight, and he has been able to keep at hard labor to the present time. Other instances could be cited going to prove the propriety or necessity of resorting to an operation in similar cases of reflex ophthalmitis, but it is not necessary to introduce them here."

A NEW PRINCIPLE IN THE TREATMENT OF PARASITIC SKIN DISEASE.

Dr. Alfred W. Perry, of San Francisco, Cal., writes: "The disappointments and delays with which I have met in treating and curing even small areas of tinea circinata, sycosis, and tinea tonsurans have led me to investigate the cause, and I believe that I have discovered not a new remedy, but the true principle of the application of old remedies. The parasiticides are all active enough to kill the parasite when brought in contact. The cause of failure is in the vehicle used. The various remedies are used in alcoholic, watery, benzine, benzol, or oleic-acid solutions, or else mixed in fine powder in ointments. The parasite exists deep in the skin, in the hair or other follicles, or between the epithelial scales. The skin is so charged with the natural fatty sebaceous secretion that it repels watery and alcoholic solutions; these cannot penetrate a follicle filled with fat. The oleic-acid solutions and ointments are not repelled, but they only penetrate the skin after much rubbing and kneading, with simultaneous epilation. A vehicle must be used which will dissolve the sebaceous matter of the skin, and also the remedy. Ether dissolves bichloride of mercury and iodine. Iodine is soluble in turpentine and benzine. I prefer the bichloride of mercury in ether, two grains to one ounce. Iodine oxidizes quickly in turpentine and slowly in benzine, while the bichloride always remains active.

"Any of these solutions, holding a parasiticide in solution, when applied to the skin, will wet or adhere to the skin perfectly, will penetrate between the epidermic epithelial scales, and into the hair and sebaceous follicles, carrying the parasiticide and dissolving the fatty secretion.

"Theory has led me to this line of treatment, of which practice has shown me the great benefit. To apply the bichloride solution in ether, use a small brush over the affected surface, two or three consecutive days, then wait for the slight irritation to subside, applying any bland ointment. There are many remedies which dissolve in the fat solvents—naphthaline, thymol, carbolic acid, chloral, salicylic acid—and these may be suited to individual cases or circumstances."

LOCAL ANÆSTHESIA FOR ELECTROLYSIS.

Dr. Franklin H. Martin, Professor of Gynecology in Chicago Polyclinic, writes: "Where it is necessary to use a very strong current of electricity for purposes of electrolysis, or any other purpose, and a reliable means of measuring the current, other than by the sensations of the patient, is at hand, it is very desirable, oftentimes, to have some means of producing anæsthesia. Especially is this the case with women who have been brought to an anæmic and nervous condition from menorrhagia coincident with a fibroid growth of the uterus. In these cases where electro-puncture is used as a means of removing the growth, or, even where the somewhat milder electrolitic current is employed for the purpose of causing absorption of inflammatory exudates, there is a very disagreeable burning sensation experienced at the positive sponge electrode. By utilizing the properties of the galvanic current, discovered by Haertner, viz., the direct transference by the galvanic current of particles in solution through permeable bodies in a direction from the positive to the negative pole of the battery (the *cataphoric* action of Du Bois-Raymond), a very satisfactory condition of local anæsthesia can be accomplished. The method adopted is as follows: Before applying the positive sponge electrode to the surface, moisten the sponge with a one-fourth of one per cent. solution of muriate of cocaine. As the current is turned on, it will be found that the absorption of sufficient amount of the cocaine is immediately promoted to produce a complete state of anæsthesia of the surface beneath the electrode. This, of course, does not affect the point of application of the negative pole—the point of introduction of the needle. Cocaine can still further be utilized here by injecting hypodermatically a small quantity of the aqueous solution at the point of introduction of the needle through the skin, or by applying a solution of the oleate upon the mucous membrane of the vagina or uterus, if the needle is introduced in this location. By bearing these simple facts in mind, electrolysis for fibroid tumor can be made familiar without the necessity of administering a general anæsthetic."

A CASE OF SACCULATED ANEURISM OF THE THORACIC AORTA.

Dr. J. A. Hobson, of Flushing, O., writes: "The patient, Mrs. S——, aged forty, American, married, mother of two children, the youngest ten years of age, has been in feeble health for the last year, but stated that she had been able to work most of the time. Her family history is good; she has never had syphilis or other venereal disease. Applied for treatment August 15, 1886. Complained of pain in her chest and back, and of difficult and painful deglutition; the pain was severe and constant, situated at the junction of the left third costal cartilage with the sternum. She said she felt as if there were a lump in her throat, referring this sensation to the episternal notch. A careful physical examination of the chest at this time failed to elicit anything of importance, except that the heart-sounds were indistinctly heard. She had slight cough with very little expectoration. She was a spare, pale woman, and looked over-worked. The bowels were constipated; respiration, temperature, and pulse were normal, except that the pulse was weak. Prescribed liquid diet, rest, and a laxative to open the bowels. I saw her again on the 21st, the patient having walked to the office, a distance of one mile. She said that she felt a little better, but had the difficulty in her throat yet. She still complained of pain in the chest and back. I then examined the throat with laryngoscope, but found larynx and trachea healthy as far as seen. The patient was directed to return home and continue diet and rest. On the 24th, in the evening, she was suddenly taken with cough, urgent dyspnœa and expectoration of blood; the difficulty of breathing was extreme, and continued with intervals of comparative comfort until 11 A.M. of the 25th, when she suddenly expectorated a large coagulum, moulded to the shape of the trachea, and containing shreds of membranous character: this was followed by very great relief. During the intervals between the attacks of dyspnœa the chest was examined carefully by the stethoscope, but no bruit could be heard; the respiratory sounds, however, were peculiar. The normal vesicular murmur was obscured by a loud, harsh, tracheal râle, that could be heard over all parts of both lungs. The pulse was weak and rapid, but the same in both wrists; the pupils were normal. The muscles of the throat were unaffected, as far as could be observed. She continued to be quite comfortable, conversing with her family and friends for several hours. About 8 P.M. of the same day she began to cough, expectorated a small amount of pure blood, and suddenly expired. There was no vomiting of blood at any time during her illness. The dyspnœa was so extreme before she threw up the coagulum that serious thoughts of tracheotomy were entertained; but the uncertainty as to the real condition deterred me from attempting the operation. While a positive diagnosis of aneurism could not be made, the friends were informed of the probable nature of the case and an unfavorable prog-

nosis was given. Tincture of hyoscyamus and bromide of potassium gave some relief to the difficult breathing.

"The autopsy was made eighteen hours after death, in the presence of Dr. J. G. Howell and others. On opening the thorax the lungs were found to be distended with air, completely overlapping the heart. They were free from disease. The pleural cavities were healthy, except for slight adhesions at the base of the left cavity.

"The heart was small and flabby, its surface covered with a moderate amount of adipose tissue which did not extend into the heart-muscle proper. Its valves were free from disease. The ascending and transverse portions of the aorta were slightly dilated, the walls thinner than normal, but free from atheromatous change.

"At the termination of the transverse portion of the arch, and about three-fourths of an inch from the origin of the left subclavian on the posterior wall, was the opening to a large false aneurism. The opening was circular, and readily admitted the point of the index-finger; the tumor lay upon the body of the second dorsal vertebra, of which it had destroyed the periosteum and eaten away a part of its substance. The tumor was about the size of an orange, and what appeared to be a projection from the main sack had destroyed the lateral wall of the œsophagus, making a circular opening about half an inch in diameter.

"The trachea and œsophagus and the walls of the tumor were united by firm adhesions, through which a small channel had been dissected forward to the posterior surface of the trachea, producing in its walls an erosion, perhaps one-fourth inch in diameter. Through the centre of this was a small, jagged opening, containing a small portion or shred of the aneurismal sac; the opening was just above the origin of the left bronchus. The sac was lined with a quantity of well-organized coagula, except at the point corresponding to the body of the vertebra and at the opening into the œsophagus. The trachea and bronchi were full of clots, and the stomach was distended with blood; no blood was found in the œsophagus. There was also a small false aneurism on the anterior aspect of the arch, at a point nearly opposite to the opening to the large sac, into which the terminal phalanx of the index-finger could be passed. The left vagus entered the mass of adhesions, and could be traced beyond apparently uninjured; the left recurrent was not found to be involved.

"The cavities of the heart and of the large vessels were empty. The openings into the trachea and œsophagus must have been simultaneous, and had evidently occurred at the moment of death. The expectorated blood, of course, came from the erosion in the tracheal wall."

TREATMENT OF PSOAS ABSCESS BY ASPIRATION.

Dr. John H. Bradshaw, of Orange, N. J., sends the following communication: "Mr. Edmund Owen, in his address on the above subject before the British Medical Association (reported in The Record of September 4th), tells us that aspiration of a psoas abscess is useless. One year ago a stout Irishman came to my office with a fusiform, fluctuating swelling in the right groin. He gave a history of a severe fall upon his sacrum some months previously. From that time till the night I saw him he had complained of much pain in right hip, and had been treated for sciatica. The hypodermatic needle revealed the fact that the tumor contained pus. I at once removed thirty ounces of pus by aspiration, and in one week repeated the operation, the second time obtaining two ounces less and emptying the sac completely. One month after this, the patient complaining of pain in back and difficult locomotion, I sent him to Dr. V. P. Gibney, who said he found the patient suffering from lumbo-sacral Pott's disease, and that there was no abscess or any pus remaining. From that time to this—a period of thirteen months—there has been no return of signs of abscess, and the man, weighing one hundred and seventy pounds, is following his occupation of gardener. There is little doubt that this case was one of psoas abscess, arising from the injury to the spine. I report it because of the frequent statements that aspiration of such abscesses do no good. Granted that a cure of psoas abscess by aspiration is rare, yet if they do occasionally obtain, is it altogether time thrown away if we first try this simple and comparatively harmless procedure before opening a large suppurating cavity and exposing it to the action of the air? I should certainly first try aspiration myself, although I knew that the chances of its resulting in a cure were slight."

DISLOCATION OF THE STERNAL END OF THE CLAVICLE WITHOUT RUPTURE OF THE COSTO-CLAVICULAR LIGAMENT.

Dr. E. C. Carter, Assistant Surgeon United States Army, of the Columbus Barracks, O., reports the following case: "While wrestling, a stout negro man, aged twenty-three, was thrown in such a manner as to strike the front aspect of his right shoulder against a stone. The sternal end of the right clavicle was dislocated forward and downward. The costo-clavicular ligament appeared to be unbroken. An attendant was directed to make strong traction on the extended right arm, and the right shoulder was pushed forward at the same time. The sternal end of the clavicle revolved around the attachment of the costo-clavicular ligament as a centre, and slipped easily into place. It was necessary to keep the patient in bed, with his right shoulder somewhat elevated, in order to prevent renewed dislocation—bandages and pressure were inefficient."

SWALLOWING A CENT.

Dr. L. E. Borcheim, of Atlanta, Ga., writes: "Remarking a case of copper-coin swallowing, reported by Dr. J. L. Gardner in a recent issue of The Medical Record, I can answer his question by reporting a similar case occurring in my practice. The three-year-old child of V. W—— swallowed a two-cent piece; it lodged in the œsophagus, and in the efforts made to dislodge it the coin was pushed into the stomach. I was consulted, examined the child, and found no objective symptoms whatever. I thereupon advised feeding the child as usual, ordered that absolutely no cathartics should be given, and counselled the parents to wait, assuring them that the coin would do no harm if left alone. My advice not being sufficiently active, the parents dosed the child with castor-oil *ad nauseam*, but no results following they finally concluded to do as I bade them, and at last, after three months, the coin was passed per anum. I examined its surfaces carefully with a strong hand-lens, but found absolutely no corrosive action to have taken place. The child was perfectly well throughout."

WHAT IS IT?

Under the above heading a correspondent, M. C., sends us the report of the case of "a gentleman, forty years of age, who, for the last six years, has practically been disabled from walking by a sensation of 'throbbing' accompanied by a peculiar and intense feeling of weakness in both insteps—greatly aggravated by exercise, and virtually prohibiting locomotion. No swelling or change of external appearance has ever been noticed. The condition of hyperæsthesia or tenderness exists over a surface of about one inch and a half by one inch. When touched, the feeling is of a dull blow, but not that of injury to a nerve. Burning sensations were formerly much

noticed, but never in both feet the same day. It hurts to go more than one step at a time in descending stairs. For the first three years the suffering was extreme and intensely annoying, constantly attracting his attention, although never interfering with sleep. During the last three years a gradual improvement has been taking place. The original cause is believed to have been a few days' wearing of tight boots."

A CASE OF IMAGINARY HYDROPHOBIA.

Dr. J. Mount Bleyer, of New York City, reports the following case: Miss P——, aged fifteen years, a well-developed and intelligent girl, was bitten through the nasal septum, on the evening of March 4th, by a pet terrier dog. At one o'clock on the morning of March 7th Dr. Bleyer was called, and found the patient lying in bed, feeling chilly, suffering from malaise, and with embarrassed respiration. The wound was congested, and there were painful sensations in the neighborhood of the bite. Suddenly spasms of the muscles of the neck, pharynx, and œsophagus occurred, and other psychical disorders made their appearance. The patient was ordered to take ten grains of chloral hydrate and twenty grains of potassium bromide every hour, and to inhale a fifty-per-cent. solution of the latter through a steam atomizer; general electrization was also practised. By these means the patient was made to sleep for about one hour and a half. The dog was examined and was found to be in perfect health. In about six hours new symptoms made their appearance. There were pains radiating from the wound, and difficulty in deglutition. Then the muscles of the jaw were seized with a tonic spasm, which afterward extended to the temporal muscles, changing from one side to the other, and the limbs became extended. During these spasms the features assumed an expression of pain, there was a frown upon the face, the gaze was fixed, and the lips were drawn apart, exposing the teeth. The tongue was bitten several times, and later some opisthotonus was observed. Even in the intervals of the spasms the hyperæsthesia was so extreme that the slightest touch, a movement of the bed, or even ordinary tones of the voice, caused fresh convulsions. This stage continued for twenty hours without any improvement in the condition of the patient. The amount of bromide and chloral was doubled and given by enema, as the patient could not swallow. She could not sleep by reason of the frequency of the paroxysms. The respirations were difficult, and from 14 to 18 per minute during the convulsions, but normal in the intervals. The pulse was frequent, 90 to 120, and often intermittent. The voice was hoarse, the mouth dry, and the tongue coated. The temperature was 100° F., the face and eyes were injected, and the pupils dilated. During the paroxysms the patient acted with insane violence toward everyone about her. In these fits she would use every available weapon to injure those about her, and would even snap the jaws, imitating the action and motions of a dog; but when the spasm was over she expressed regret, and warned those about her to be on their guard when the next paroxysm should come on. She had a feeling of abhorrence for water, and this increased to such a degree that a convulsion was excited by contact, by sight, or even by the sound of water poured from a pitcher into a glass. She became so violent on hearing the dog bark that it became necessary to remove the animal from the house. Inquiry elicited the facts that there was a marked hereditary tendency to nervous affections; that the child had read all the newspaper accounts of hydrophobia, and knew all the symptoms as given in these reports, and had also been much interested in the controversy concerning the efficacy of Pasteur's preventive inoculations. The diagnosis was made of lyssaphobia, or hysterical hydrophobia. Many remedies were tried without success, and the only thing that controlled the spasms at all was extract of opium, in grain doses every hour, and this was effective only so long as the patient was kept profoundly under the influence of the drug. Finally, Dr. Bleyer determined to try the effect of psychical impressions. He ordered a pill to be made, and as he entered the patient's room it was handed to him. He gave it to the patient, asking her to take it, and she did so, swallowing it at once. In fifteen minutes he entered the room again, and told the patient that the pill she had taken was a very strong one, and that if she had another convulsive attack it would kill her, but otherwise it would effect a perfect cure. From that moment the patient never had another paroxysm.

A SINGULAR CASE OF ROUND WORM.

Dr. H. E. Merkel, Assistant Surgeon to the State Hospital for Injured Persons, at Ashland, Pa., writes that a man, aged twenty-one, applied there for admission, saying that he had strained himself by lifting a heavy piece of timber in the mines. On examination, the muscles just above Poupart's ligament were found very hard and considerably swollen. A blister was applied to the right side of the abdomen, and one-fourth grain of calomel was given every two hours. The blister had but little effect on the swelling. As soon as the skin was in proper condition another blister was applied, but with no better results. Applications of iodine ointment were then made, and continued for four weeks, there being still no noticeable change. Blisters were again used, but with no better result; in fact, the swelling and pain on both sides of the linea alba increased. The patient's temperature had been normal, until one evening, about seven weeks after admission, he was seized with a chill, and the temperature rose to 103° F.

Dr. J. C. Biddle, the surgeon-in-chief, on making his round the next morning, carefully examined the swelling with the exploring needle, and found that it contained pus. He made an incision, and removed about four fluid ounces of healthy pus. The cavity was then washed out with a solution of the bichloride of mercury, and poulticed. Twelve days later pus was discovered in the left side, the abscess was opened, and with about two fluid ounces of pus a lumbricoid worm nine inches in length appeared. The patient claimed that he had never been sick, nor did he suffer any pain, prior to the time he lifted the timber, and up to the time of the occurrence of the chill he had had very little pain, and that was of a dull kind, showing clearly that there could have been no perforation of the intestines, nor peritonitis.

Dr. Merkel offers the following theory in explanation of the appearance of the worm in this unusual locality: "The patient at some time must have had a rectal fistula below the mesorectum, and the worm passed through the fistula, and then worked its way up between the fascia and muscles, and was there lodged. My reasons for stating this case so fully are to show how easily one can be misled by a patient's story. This hospital is for the care of injured persons only, and, of course, had this man not attributed his trouble to an injury, he could not have been admitted. Having never seen or heard of a like case, I think I can justly claim the honor of reporting the first of its kind."

A New Journal in Cuba.—We have received the first number of the *Revista Enciclopedica de Ciencias Médicas, Fisicas y Naturales*, published in Havana. Although devoted chiefly to medicine, the review will contain articles on other scientific subjects, such as natural history, anthropology, agriculture, etc. The number before us contains several interesting articles, for the most part original, on various subjects, and if the future issues sustain the promise of the first we can prophesy a long and useful life for the *Revista*. The editor-in-chief is Dr. Carlos de la Torre y Huerta, and the New York correspondent is Dr. R. L. Miranda.

Progress of Medical Science.

TRAUMATIC TETANUS WITHOUT EXTERNAL WOUND.—Dr. Acontz relates in *Spitalul*, No. 4, 1886, the case of a healthy trooper who, having received a blow in the hepatic region, instantly fell insensible and remained so for two hours, by the end of which time trismus suddenly appeared. A venesection was performed, and leeches were applied to the hepatic region. Both of these means, however, failed to rouse the patient. He came round only after a hypodermic injection of five centigrammes of hydrochlorate of morphia. The further treatment was expectant. The man improved from day to day, and after a ten days' stay left the hospital quite well.

PREVENTION OF MISCARRIAGE.—Dr. W. J. Strother reports the case of a married woman, thirty years old, who had had six or seven miscarriages, these generally occurring from the third to the fifth month. Hemorrhage would begin about the second month, and recur every four days until the fœtus was expelled. At the last miscarriage Dr. Strother was in attendance, and remembering having read of a case of abortion reported as being due to fatty degeneration of the placenta, in which tincture of chloride of iron and chlorate of potassium were employed with success in the succeeding pregnancy, he examined the placenta and found it almost one mass of fat. At the beginning of the patient's next pregnancy, therefore, he ordered a mixture of tinct. chloride of iron, ʒ iij., and chlorate of potassium, ʒ iij., in water, ℥ vj., of which a teaspoonful was given three times a day. She took this regularly almost every day until she was delivered, at full term, of a healthy male child. About the third month she had a slight "show," but the hemorrhage never returned.—*Gaillard's Medical Journal.*

THE KIDNEY IN DIABETES.—In a memoir lately published ("Le Rein dans ses Rapports avec le Diabéte") Dr. P. S. Inglessis gives the results of his investigations upon the renal changes that accompany diabetes mellitus —changes which he avers are more frequent than is commonly admitted. The most constant is hypertrophy of the kidney, a condition doubtless related to the polyuria that is mostly the chief indication of the functional derangement of the organ. This hypertrophy is, according to the writer, characterized not only by obvious enlargement of the kidney, but histologically by a notable increase of the cells of the convoluted tubules. While renal hypertrophy characterizes the earlier stages of the disease, renal inflammation is more common in the advanced period. Parenchymatous nephritis is the usual type, but it is difficult often to eliminate all other causes besides diabetes in many cases. In some, however, there is no question of the direct relation between the two affections.—*The Lancet*, August 28, 1886.

TREATMENT OF SYPHILIS BY INTRAMUSCULAR INJECTIONS OF MERCURY.—In a recent lecture Mr. J. Astley Bloxam stated that over fifteen hundred patients had been treated by this method, at the Lock Hospital and elsewhere, during the past eighteen months, with the best results (*The Lancet*, August 21, 1886). The solution for injection contains six grains of the bichloride to the ounce of distilled water, and of this twenty drops constitute a dose. The sore generally begins to heal very promptly after one or two injections, the secondary symptoms are markedly modified, and after a course of treatment extending over a year, more or less, the patient is enabled to discontinue his attendance. Toward the latter end of the course of treatment the injections may be given less frequently, and, as a general rule, not more than from eight to twelve grains of the perchloride are injected in all. It is undesirable to repeat the injections oftener than once a week, as otherwise salivation might be induced, and the quantity injected each time (one-third of a grain) is found to be quite sufficient until the next time. There are several advantages attending this method of exhibiting mercury. In the first instance, it is only necessary to see the patient once a week, when sufficient mercury is injected to last until the following week; secondly, salivation is not produced, as was apt to happen when the patient continued to take mercury for a whole week away from the supervision of his medical attendant; thirdly, the gastric derangements which are so apt to follow the administration of mercury by the mouth are by this means avoided; lastly, the ease and certainty of the administration, which enable the surgeon to do his own dispensing with a minimum of trouble. A little quinine is generally given during the course as a tonic, but no other form of mercury is administered. The injections are made preferably deep into the muscular mass of the glutei; the pain following is slight and soon passes away, and there is no danger of an abscess. It is desirable that the patient should not take active exercise immediately after the injection, as it has been noticed that blood may be effused at the point of injection, giving rise to the sensation of a severe bruise of the part, which lasts for a few days. The same effect has followed the puncture of a large vessel, but in any case the result is only transient, and disappears after the lapse of a few days.

A CASE OF VOLUNTARY STARVATION.—Dr. A. Voelkel, in the *Deutsche Medicinische Wochenschrift*, No. 31, 1886, reports the case of an old toper, of a very obstinate disposition, to whom the landlords finally refused to supply any more liquor. The man said then that he would live no longer, went to bed, and refused to take any food. He lived for twenty-four days, taking nothing but a little water and brandy. He died in a deep stupor, without convulsions. At the autopsy the body was found not to be greatly emaciated, a considerable layer of fat still remaining on the chest and abdomen. The stomach and intestines were filled with gas, but the intestines were otherwise entirely empty, and the stomach contained only about three ounces of a brownish fluid, the walls of both stomach and intestines being very thin and pale. The kidneys were normal, but rather soft; the bladder was empty. The spleen was very small, the liver fatty, and the gall-bladder was filled with about an ounce of thick brown bile. The heart was small, fatty degenerated, and empty; the lungs contained air, but were dry on section. All the organs were very anæmic.

CONSERVATIVE SURGERY OF THE FINGER. — Mr. Charles Tanner reports the following case, illustrating the value of conservatism in the surgical treatment of injuries of the fingers, in the *British Medical Journal* of August 7, 1886. A domestic servant while chopping meat had nearly amputated her left forefinger. The bone was completely severed, and both digital arteries were divided; the only parts uninjured were the skin and subcutaneous tissues, and the flexor tendons on the palmar aspect of the finger. The wound was carefully cleansed with carbolic-acid lotion (1–20). Both digital arteries were ligatured, and the edges united with deep silver-wire sutures. Iodoform was dusted on, a piece of protective placed round the wound, the finger enveloped in salicylic wool, and the arm placed on a pistol splint. The sutures were removed in a fortnight; the wound, with the exception of a granulating surface on the cased side of the finger, had healed by first intention. Within a short time after the removal of the dressing the patient could move this finger almost as well as the others.

AN OLD WOMAN.—A woman, named Mrs. Dietrich, recently died at the good old age of one hundred and twenty-six years in Savoy. She was born in Basle in 1760, was married for the first time in 1783, and for the third and last time in 1798. Up to the age of one hundred and nine years she could see perfectly well and was in the possession of all her faculties, but during the last years of her life was in a semi-stupor most of the time.

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HOT WATER AS A HÆMOSTATIC.

THE August and September numbers of the *Edinburgh Medical Journal* contain a most interesting article, by Dr. R. Milne Murray, on the effect of hot water when applied to the unstriped muscular fibre of the uterus, particularly with reference to checking hemorrhage. Dr. Murray combats the well-known view of Emmet on this subject. This view is essentially this, that while the primary effect of hot water is to cause a relaxation of tissues, this is speedily followed by a reaction, that is, a tissue-contraction. This conclusion Dr. Murray characterizes as an attempt to "square a preconceived idea with an observed fact."

The paper alluded to is a recital of a series of experiments regarding the effect of thermal stimuli on the uterine fibre and unstriped muscles generally. Water was the medium generally used. Three different gradations were employed—cold (32°–60° F.), intermediate (60°–100° F.), and hot (100°–120° F.).

The animals experimented on were rabbits, both pregnant and non-pregnant. The mode of procedure was as follows: A median abdominal section was made just above the symphysis. The vaginal tube or uterine cornu was drawn out through the incision, and adjusted to a clamp at the vaginal end firm enough to prevent slipping but not so tight as to damage the tissues. A similar arrangement was made of the vaginal tube, except that the latter was so arranged as to allow the vessels to lie in the spaces between (not directly under) the clamps. In the end of the tissue was inserted a fine steel hook, connected with a silk thread running under a pulley, and attached to a lever which moved in a vertical plane on a revolving drum.

The contraction of the muscular tissue consequently caused the lever to move in an up-and-down direction on the drum.

"When the vagina or uterine horn of the rabbit is arranged as described, evidence is invariably afforded of the existence of regular contractions of the muscular wall, resulting in a rhythmic shortening of the tube. It will be found that the lever describes a series of up-and-down movements, representing regular contractions and relaxations of the portion of muscular tissue under observation. The rate at which this movement occurs is somewhat variable in different animals." The nature of the movement is distinctly peristaltic. In the uterine horn they are less ample than in the vagina, but occur at the same rate. They can be abolished by deep chloroform narcosis, but not readily by ether.

In the adult rabbit they will go an hour after—a contraction occurring about every two minutes. They can be traced by the gradual travelling over the muscular tissue of an "anæmic segment," that is, the seat of maximum contraction at any given instant, when and where the vessels are, of course, constricted, causing a temporary anæmia. The movements are not notably affected by temperature, are different from those produced by thermal and other stimuli, and are the same after the return of the uterine cornu to the abdomen.

Dr. Murray thinks that "the whole uterine apparatus of rabbits, and presumably of other animals, is the seat of regular rhythmic contractions independent altogether of pregnancy." In the case of a pregnant woman (primipara) the experiment was made of placing in the vagina a Barnes bag containing, but not distended with, water. The tube was connected with a water manometer, and the latter gave evidence of distinctly rhythmical variations of pressure.

In the experiments on rabbits each tracing on the drum showed, first, a period of contraction; second, one of quick relaxation; and third, one of slow relaxation. Water at varying temperatures was allowed to drop on the muscle under experiment in the following manner: A glass pipette containing 5 c.c. was immersed in water of the temperature to be used. It was then filled, held in the clamp over the muscle, and at a given signal allowed to discharge its contents on the latter. It is evident that any variation in the contraction would be registered in the tracing on the drum. The time of application was just at the close of a natural contraction, so as to eliminate as far as possible the natural rhythm.

In the application of water at various temperatures it was necessary to note, first, the latent period, *i.e.*, the time elapsing after the application before the effect began, and, second, the modification on the three elements of a rhythmic contraction. With water at 42° F. the latent period was thirty seconds; of quick contraction, twenty-five seconds, and of slow (gradual) contraction, three minutes and fifteen seconds. With water from 50° to 60° F. the latent period was lengthened, the contraction less and more brief, and the relaxation shorter, but the same in character. Repeated applications at the latter temperature diminished both the latent and relaxation periods, and there was a diminution in the maximum rise—that is, "the repeated application of cold water rapidly exhausted the excitability of the uterine muscle." It will be understood that the period of relaxation represents the gradual subsidence of the muscular "tonus."

With water above 100° F. three important facts were noticed: the total abolition of the latent period (instant contraction), the rapidity with which the contraction developed and attained its maximum, and the long duration of relaxation (prolonged tonus). Continued applications at 100° showed that the latent period shortened slightly, the contraction period was nearly constant, while the period of relaxation was enormously lengthened, and the maximum intensity increased.

Dr. Murray continues: "In speaking of the action of

cold water, I pointed out that repeated applications of cold failed to reproduce a reduction of the contraction until a period of rest had, first of all, intervened. The action of warm water presents a contrast to that of cold in this respect. If a second application of hot water be made to the portion of muscle undergoing relaxation, it will at once respond, and contraction will immediately ensue; and this can be repeated indefinitely." The vitality of the muscle-fibre was not exhausted by the hot water as with cold. "Not the remotest evidence is afforded of Emmet's statement, that hot water always induces relaxation first and contraction afterward. Water at 110° F. and upward invariably induces contraction from the very first, and that much more rapidly than cold water does."

Bearing in mind that muscular contraction is synchronous with, or rather signifies, an anæmia of tissue, the application of hot water in hemorrhage is at once obvious. Dr. Murray gives it high praise, both in post-partum hemorrhage and in any pelvic congestion. His experiments show that it is serviceable even after cold has ceased to have any styptic effect. In cases of inevitable abortion he recommends its use for purposes of expulsion of the ovum. It does not withdraw bodily heat, as does cold water, but rather supplies it. His article is a valuable and most interesting contribution to current medical literature.

CAN SCARLATINA ARISE SPONTANEOUSLY?

It is very generally admitted, and indeed insisted upon by most authorities, that scarlatina can never arise *de novo;* there must be a contagium of some sort, whether it be a micro-organism or some other influence of unknown nature, carried directly or indirectly from the body of the sick person to a healthy one. Without the agency of some product of the disease, it is claimed scarlet fever would never occur. There are some, however, who oppose this view, and believe that, while the most usual mode of origin of the disease is by contagion, yet under certain conditions the virus of the scarlatina and similar affections may be elaborated within the body independently of any influences from without.

Dr. G. De Matheis, writing in the *Gazzetta degli Ospitali* of August 25, 1886, reports some instances of apparently spontaneous origin of scarlet fever, which will doubtless be accepted as conclusive by those whose views they tend to strengthen.

The following are the circumstances of the cases cited: A boy, fifteen years of age, was taken with scarlet fever. He lived in a little hamlet called San Lorenzo, a portion of the commune of Demonte, way out of the world. None of the inhabitants of the place had left Demonte for over a month, and in all that time no letters nor papers had been received, and no parcels had been brought into the place. There was no scarlet fever within a radius of very many miles around San Lorenzo. The only arrival had been a young man who returned from hospital in the French town of Barcelonette, where he had been under treatment for arthritis. But there was no scarlatina in this town, nor anywhere along the route taken by the young man in his journey home. Several other children contracted the disease from this case.

While this little epidemic was running its course in San Lorenzo, at the extreme eastern end of Demonte, another case occurred at Perdione, lying at the western limit of the commune. There had been no communication between these two localities. Some three weeks later two more cases occurred at a little settlement situated on the other side of the Stura River, opposite Perdione, and between which place and the other localities there had been no communication.

The conclusions which the writer drew were that the first case at San Lorenzo was undoubtedly of spontaneous origin; that the case at Perdione might have been of like origin, or the virus might have been carried by the air across the commune from one extremity to the other; and lastly, that the cases occurring on the opposite side of the river from Perdione probably arose from transportation of the contagium by the atmosphere.

The weak point in the first case is, of course, the fact of a man having come to the place from abroad. Although he did not know of any case of scarlet fever in the town from which he came, it is not impossible that he may have met some one on his journey who had come from attendance on a case of the disease, and was carrying the virus in his clothes. This would seem to be the only possible explanation of the outbreak of the disease, unless the theory of spontaneous origin be accepted.

THE LONG-BEARD HABIT.

It has been observed that a large proportion of the members of the American Medical Association are bald-headed, and a thoughtful contemporary has tried to establish some philosophical relation between loss of hair and the art of medicine. Such speculations are likely to be fruitless, and we shall not attempt to pursue them. A much more practical and definite problem is that relating to the doctor's beard. It is a well-known fact that American physicians, in many parts of the country, have a tendency to raise long beards. In fact, we may call it an almost exclusively American practice, if not actually a national institution.

It is, of course, a delicate thing to venture comments upon the personal characteristics of the sensitive *savants* who make up American medicine. But we feel it a duty to say that all the long beards now ornamenting our profession ought to go, and this on sanitary and æsthetic grounds, as well as for certain important practical reasons which we shall presently set forth.

It has been fully demonstrated that the hair is a frequent carrier of contagion, and that nothing is better adapted to catch up all kinds of germs, and to form a culture-ground for infective poisons than a well-developed, long-flowing beard. This appendage may be, indeed, a veritable sickle of death, and we have no doubt that in the medical history of the past the beard has been no mean agent in the distribution of epidemic and infective disease. On sanitary grounds, therefore, long beards should not be tolerated among physicians, unless the proud possessors are willing to give them antiseptic dressings every day.

It will be admitted, we think, by the student of historical ethnology, that indulgence in long beards is a characteristic of an undeveloped civilization. They were greatly esteemed among the patriarchs and the Druids, and in the early days of the world, when clothing was more scanty and the amenities of the table less

thought of. But the pride which is taken nowadays in the length of the hair or of a finger-nail is, in reality, an atavistic feeling that is dying out in civilized races, and ought to die more rapidly. Hercules was bearded, but Apollo was smooth-faced. And the god of medicine has been instinctively imitated by his most successful followers. Hardly a doctor of the first eminence in the world's history ever wore a long beard, and he who possesses one may as well concede at once that he will never rise above mediocrity. In the long list of distinguished English and American physicians, from Linacre and William Harvey to John Hunter and Benjamin Rush, there are only beardless or short-bearded faces. Among distinguished Frenchmen, Paré wore a short beard; but in later times we find that Dupuytren, Nélaton, Andral, Laennec, Cuvier, Bichat, Ricord patronized the barber, and turned the physiological energies that might have been lost in making hair into the making of brain.

Reviewing the history of medicine, it almost seems that the greatness of medical men is inversely proportional to the amount of hair grown upon the chin! At any rate, we trust that we have successfully shown that long beards are not the things for doctors, but are unhygienic, barbaric, and inconsistent with great historic precedents and the attainment of the highest professional eminence.

We cannot construct at present a "long-beard" map, with darkened areas showing the prevalence of the "Beard-Habit" in this country, but if it could be done we are quite sure that it would prove this habit to be a morbid one, and, like malaria, highly antagonistic to scientific progress.

THE PROPOSED CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE meeting of the representatives of the several special national organizations which was held in Philadelphia on September 24th has resulted in satisfactorily arranging for the organization of a National Medical Congress. The nine special societies, a list of which we have already given, practically agreed that such a meeting shall be held in 1888, at Washington, D. C., during the month of September.

The meetings are to be held every three years; the autonomy of the special societies is not to be disturbed, and each society can withdraw at any time if it so desires.

The special feature of the meeting will be the conjoint assemblage of the special societies on two evenings during the session; on one of which there will be an address delivered by the president of the conjoint meeting; on the other communications will be made by a referee and a co-referee on some subject of general professional interest. Each special society approving the arrangement is invited to appoint one representative (with an alternate), and the representatives so appointed will constitute an executive committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary; to prepare a programme for the meetings; and to make other necessary arrangements.

The preliminary arrangement thus agreed upon is one which commends itself as moderate and sensible. The adoption of a triennial session and the complete autonomy of the special associations will give to the Congress a distinctive character.

News of the Week.

ANOTHER OFFICE SNEAK-THIEF.—We warn city practitioners against an Irish girl, about twenty years of age, dressed in well-worn finery, who is anxious to have them call at once at a house in West Fifty-sixth Street. She is dressed in black and white skirt and black jersey, frayed under the right breast so as to show corset beneath. She tells a plausible story about a child with paralysis, the weak point being that her dress does not indicate that she is the niece of a lady living in the best part of the city. Several physicians have been victimized by this sneak-thief.

RECEPTION IN HONOR OF DR. SHAKESPEARE.—A reception was tendered, September 29th, by the medical profession of Philadelphia, to Dr. E. O. Shakespeare, on his return from official medical service in Europe and Asia. It was largely attended by the leading medical men of Philadelphia and other cities.

PROFESSOR SCHROEDER, of Berlin, was recently called to Kiew to perform an operation for myofibroma. For this he received 10,000 marks (about $2,000).

THE AMERICAN RHINOLOGICAL ASSOCIATION held its fourth annual meeting at St. Louis on Tuesday, Wednesday, and Thursday last. The number of papers read was larger than ever before.

DEATH IN A DENTIST'S CHAIR FROM ETHER.—We learn from the daily press that an unknown woman entered the office of Dr. C. H. Moseley, a dentist of Brooklyn, suffering from toothache. Ether was given and the tooth extracted. The patient recovered consciousness for a moment, then sank back unconscious and died.

THE AMOUNT OF GREEK NEEDED BY MEDICAL STUDENTS.—At the Berlin Congress of German Naturalists and Physicians, Professor Schwalbe, director of a Berlin *Real-Gymnasium*, in speaking of the knowledge of Greek necessary for the understanding of medical and scientific terms, said that he was preparing a Greek primer for equipping students with that knowledge. After a careful consideration of the subject, he had come to the conclusion that for the purpose in question it was sufficient to know about one hundred Greek nouns, twenty to twenty-five adjectives, fifteen to twenty pronouns, fifty verbs, the cardinal numbers, and a few adverbs and particles. All this could easily be acquired during the first semester at the gymnasium.

THE BROOKLYN CHARITIES COMMISSIONERS have been indicted by the grand jury for neglecting to provide for the care of the insane. This indictment is the result of recent occurrences at the Flatbush Asylum.

THE CHOLERA HAS REACHED Austro-Hungary and seems to be surely spreading.

A PLEA FOR RATIONAL MEDICINE.—A good man struggling with adversity is a sight which ought to awaken lively and sympathetic interest. Such a sight is presented by the *New York Medical Times*, which, for

some years, has been manfully endeavoring to rid homœopathy of its sectarianism and distinctive name, while still claiming that it represents one of the most important of therapeutical principles. In consequence of its course it is receiving severe criticisms from many of its quondam brethren, while it gets a very unappreciative hearing from the regular school. For example, one of our contemporaries prints the following, apparently unaware that *The Times* has been saying this same thing for several years: "Homœopathists Getting Their Eyes Open.—The following remarkable passage appears in a recent issue of the (homœopathic) *New York Medical Times:* 'Go on in your sectarian course, ultra-devotees of Hahnemann, if you will, be loyal to the teachings of your master if you must, but shut not your eyes to the fact that science has rendered obsolete many tenets of his system and removed the last vestige of an excuse for maintaining an organization of physicians under an exclusive title, distinct and separate from the medical profession at large. The ultra-school of medicine has fulfilled the complete measure of its usefulness as a separate organization. Loyalty to truth and progress now demands that it shall drop its narrow, sectarian name and no longer seek to keep its members in leading strings. In the nature of things there can be but one system of medicine recognized by science. Either homœopathy must absorb the old school or be absorbed by it.'" It would be better, we think, to give to such sentiments a hearty endorsement, with success to those who utter them.

New York's Medical Societies.—Thirty-one different medical societies begin their nine or ten months' work during the present month in this city. These societies meet, as a rule, monthly; but seven of them meet twice a month, so that there is an average of seven or eight meetings every week. This appears to be an excessive number, and one likely to lead to the production of too much shallow talk and superficial work. Still, it is to be remembered that many of these societies are small, private, and unambitious; their objects being as much social as scientific. The serious work is chiefly done in about half a dozen societies, and as these have over two thousand physicians to call upon, they ought all to do some creditable work.

The Coming Substitute for Carbolic Acid.—D. F. Hueppe believes, as the result of extended experiments, that aseptol (orthophenol-sulphate, $C_6H_4(HO)SO_2HO)_2$ is destined to take the place of carbolic acid as a disinfectant and antiseptic. It is a syrupy brown fluid of aromatic odor, and soluble in alcohol, glycerine, and water, and is not irritating in as strong as ten per cent. solutions. As an antiseptic it equals carbolic acid, while having the advantage of pleasanter odor, more solubility, and of being less irritating and toxic.

Not a Believer in Preventive Inoculations.—"Bacteriological therapy, as practised by its adherents, has given little or no positive results; and Dr. Koch does not look forward with any degree of confidence to inoculation ever being available as a therapeutic agent or as a preventive measure, but holds that, by reason of the advance in our knowledge regarding the etiology of disease, we are able to establish better hygienic conditions and thus prevent the spread of disease." So writes the Berlin correspondent of the *Philadelphia Medical Times.* But there may be a little race prejudice in this view.

A Case of Arson Discovered by a Surgeon.—A fire broke out in a cigar shop in Hulme, England, not long ago, and on the arrival of the fire brigade there were found to be three distinct fires in different parts of the shop and house. The two firemen who first entered were nearly suffocated by a dense white smoke, and applied to Mr. Heslop, Divisional Surgeon, Manchester police force, a day or two after, complaining of a rawness of the throat and chest, very different from anything they had experienced before. On account of what they told, Mr. Heslop burned some phosphorus in their presence, and they at once recognized the smell. Some phosphorus was then placed in some shavings, and it ignited spontaneously in about eight or ten minutes, and in sawdust in about twenty minutes.

A Monster Child.—Dr. N. E. Davies writes in *The Lancet*, that a thin little woman gave birth to a male child sixteen months ago, at the village of West Camel, Somerset. When born the infant was of ordinary size in every way; it now weighs and measures as follows: Length, 36 in.; circumference round abdomen, 33 in.; chest, 30 in.; thigh, 17 in.; calf, 11½ in.; neck, 15½ in.; arm, 10 in.; and face, 17 in. Its weight is 64 lbs. The father is a man of ordinary size. The infant seems very intelligent and happy, but on account of its enormous weight it cannot be lifted without expressing pain.

Statistics of Color-blindness.—Dr. Worms, having examined 11,175 persons in respect of color-blindness, has communicated his results to the French Academy of Medicine. Of the above number he found two only incapable of distinguishing one color from another; three were blind for red and six for green, eighteen could not distinguish green from red, fifteen saw no difference between green and blue or gray, and fifty-two had a peculiar weakness in color vision in general.

Deaf-mutism in Spain.—There are, according to Señor Navalon, principal of the National Deaf-mute College in Madrid, over ten thousand persons so afflicted in Spain. For the care of these there are five institutions, all, with the exception of the National College, supported by private charity.

Vicarious Menstruation.—Puech has collected the statistics of 200 cases of vicarious menstruation, with a view to determine the parts of the body most liable to be the seat of vicarious hemorrhage. Bleeding occurred from the roots of the hair in 6 cases; from the auditory canal in 6; from the lachrymal gland in 10; nose, 18; gums, 10; cheeks, 3; mouth, 4; bronchi, 24; stomach, 32; mammary glands, 25; axilla, 10; umbilicus, 5; bladder, 8; intestines, 10; hands, 7; inferior extremities, 13: various other regions, 8. In girls who are the subjects of vicarious menstruation, the genitals are always moist at the menstrual periods, and give rise to a mucosanguinolent secretion.—*Giornale Italiano delle Scienze Mediche.*

THE PASTEUR INSTITUTE.—The Paris Municipal Council has extended the concession of the site for the proposed Pasteur Institute, in the Rue Vauquelin, from thirty to ninety-nine years. The proposal gave rise to a heated discussion, but was finally carried by a vote of about three to one.

A NEW SWISS LAW AGAINST EPIDEMICS.—A law has been passed in Switzerland making it compulsory upon the keeper of the house where the patient is and upon the attending physician to report every case of contagious disease to the local authorities and to the health officers. A penalty of 1,000 francs is imposed upon anyone who neglects to comply with the law. The responsibility of disinfection and isolation of the sick rests upon the cantonal authorities.

TRICHINOSIS IN GERMANY.—Many cases of trichinosis have occurred recently in Zittau and Lyck in Germany. The origin of the epidemic was traced to some sausages eaten raw, made from meat obtained in a neighboring town.

CHANCRE OF THE EYEBROW.—A man, aged forty-two, was admitted into the Lariboisiere Hospital, under the care of M. Siredey, for paralysis of the fingers, probably due to lead-poisoning. On examining the skin, he was found to be suffering from a secondary syphilide. The patient said he had not had sexual intercourse for a year, that he had been in another hospital six weeks before, when the doctor there said he had mucous patches on the scrotum and examined the penis, but found no trace of a sore. On examination, an indurated cicatrix was found on the left eyebrow, and the corresponding pre-auricular gland was enlarged. Afterward syphilitic erosions appeared in the mouth. The man stated that, during a quarrel, three months previously, he had been bitten by his antagonist on the left eyebrow.—*London Medical Record.*

DEATH FROM THE BITE OF A CAT.—A man has died in Grenoble from hydrophobia resulting from the bite of a mad cat. He was bitten on April 30th, and was under Pasteur's care from the 4th to the 10th of May. He died on July 31st. This was the fourth death of those inoculated by Pasteur, leaving out of the count the Russians who were bitten by mad wolves.

APPROVING PASTEUR'S METHODS.—The President of the Local Government Board, Mr. C. T. Ritchie, reported in the British House of Commons on August 26th, that the committee appointed by the Government to examine into Pasteur's method of inoculation for the prevention of rabies, were fully satisfied that his treatment for hydrophobia was effective.

THE TURPENTINE TREATMENT OF DIPHTHERIA, of which much has been said of late, was the subject of a paper by Dr. Delthill, of Nogent, at the recent meeting of the French Association. M. Delthill has treated 134 patients, of whom 126 were cured. He employs the fumes of turpentine and coal-tar, with local applications of turpentine. The same method is an efficient prophylactic only 3 cases occurring among 670 persons exposed.

POST-GRADUATE INSTRUCTION IN NEW YORK.—The winter sessions at the Polyclinic and the Post-Graduate Medical School in this city have now begun. The class at the latter institution during the last year numbered 185. No changes have been made in the faculty, except that some additional instructors have been appointed. The hospital attached to the school offers facilities for clinical instruction in the performance of many of the major surgical operations. At the Polyclinic the class during the session of 1885–86 numbered 240. Dr. Leaming has been made Emeritus Professor of Diseases of the Chest and Physical Diagnosis, and remains as President of the Faculty. A department of Otology has been established and placed in charge of Dr. O. D. Pomeroy. With these exceptions the list of professors remains almost as it was at the organization of the institution.

THE CHARLESTON MEDICAL RELIEF FUND.

CHARLESTON, S. C., October 1, 1886.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR: At a meeting of the medical profession of the city of Charleston, held September 30, 1886, the following preamble and resolutions were adopted:

"*Whereas*, A letter to the editor of THE MEDICAL RECORD (September 25th) has caused surprise and mortification to the medical profession in Charleston, inasmuch as the statement is made that the profession *en masse* are anxious for immediate pecuniary aid; and

"*Whereas*, The profession have suffered from the recent earthquake in no greater degree than their fellow-citizens, and are unwilling to be placed in a false position; be it therefore

"*Resolved*, That in making our acknowledgments to our professional brethren for their sympathy, we desire to inform them that we are not applicants for their bounty, and deeply regret that a call should have been made on them. That the profession *en masse* are not anxious for immediate pecuniary aid, nor would they consent to receive it, except in possibly a very few individual cases of necessity, when no shame could attach to the full knowledge of the facts as they are.

"*Resolved*, That they unmistakably and clearly state, that the medical profession refuse to assume the singular position of special distress, in any sense requiring other assistance than the kindly charity of the generous, which is being outpoured for the needy of the city of Charleston.

"*Resolved*, That a certified copy of the above resolutions be sent to THE MEDICAL RECORD, with a request for publication."

The following resolution was unanimously adopted:

"*Resolved*, That we commend to the large-hearted liberality of our professional brethren elsewhere the condition of our medical college, with the assurance that their generous aid to rebuild its ruined walls will be worthily bestowed and fully appreciated."

H. W. DE SAMPSON, M.D.,
Chairman of the Meeting of the Medical Profession of the City of Charleston.
MAZYCK P. RAVENELL, M.D., *Secretary.*

A NOTE FROM DR. MICHEL.

CHARLESTON, October 2, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In my letter, which you published in your issue of September 25th, the following paragraph occurs:

"That the profession *en masse*, while anxious for immediate aid—some to rebuild their homes, others for their daily necessities, since no bills are collected—are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted."

This should have read:

"The physicians *en masse* are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted, while some are anxious for immediate aid to rebuild their homes, others for their daily necessities, since no bills are collected."

In the hurry of a delayed reply to a letter which you wrote me, stating that you had voluntarily made a call upon our Northern brethren in behalf of the suffering physicians and their families in this city, and asking me to suggest my views on the subject, I intended, in the above paragraph, to convey the sentiment of a large meeting held at Professor Prioleau's house, at which the profession *en masse* refused to solicit aid; and, at the same time, to express my individual opinion that there were some who certainly required assistance to rebuild their homes, and others until collections could be made.

My particular suggestion, however, was that our urgent need, at present, and what we "look for, is the means to rebuild our poor old college, and in this direction you must move with others to help us."

To the circular which your committee has addressed to each physician, several have already accepted your generous kindness.

Very truly your obedient servant,

MIDDLETON MICHEL, M.D.

[These letters speak for themselves. While apologizing to "the profession *en masse* of Charleston," we are glad to learn that "there are only a very few individual cases of necessity." To the latter the funds will be distributed by the Relief Committee, which is empowered to use its discretion. If even these individual cases decline to be assisted, the Committee can return the money through THE MEDICAL RECORD to the original donors.—ED.]

The following subscription has been received since last acknowledgment:

W. H. Bryant, M.D., Savannah, Mo..... $3 00

Reviews and Notices.

HYGIENE OF THE VOCAL ORGANS. By MORELL MACKENZIE, M.D. 12mo, pp. 223. London: Macmillan & Co., 1886.

DR. MACKENZIE is too well known to need any introduction. This, his latest work, is a practical handbook for singers and speakers. The author claims "no pretension to speak with authority as a musician, or even as a physiologist," but endeavors to treat of the relations of voice production to the "well-being and functional efficiency of the vocal organs." Dr. Mackenzie is a specialist of the extreme type. His writings are accurate and his style clear. Here and there, however, the mercantile rather than the professional tone crops out in his literary work. Of this spirit the present volume shows numerous examples. However, it is well worth reading.

TOKOLOGY: A BOOK FOR EVERY WOMAN. By ALICE M. STOCKHAM, M.D. Pp. 371. Chicago: Sanitary Publishing Co. 1886.

"TOKOLOGY," which, being interpreted, is a talk on midwifery, is a mixture of sense and nonsense, which hardly comes within the pale of medical criticism, since no physician, glancing at it, would think of putting in the hands of his patient so unscientific and quackish a presentation of the subject.

CARLSBAD AND ITS ENVIRONS. By JOHN MERRYLEES. 12mo, pp. 199. New York: Charles Scribner's Sons. 1886.

THIS is a concise, well-written guide-book for English-speaking people who contemplate a visit to the famous German Spas. A short medical treatise on the use of the waters is added. Its author—Dr. B. Loudon—a resident physician at Carlsbad, gives in a popular and interesting way an account of the diseases favorably affected by the waters, with full directions for taking the latter.

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD. With Chapters on the Investigation of Disease and on the General Management of Children. By LOUIS STARR, M.D. Pp. 385. Philadelphia: P. Blakiston, Son & Co. 1886.

AMONG the many books and treatises which constantly appear on children's diseases we could scarcely expect in the latest comer anything especially new or unheard of. Dr. Starr's work does not claim attention from this standpoint, but from that most commanding of all, experience. He devotes himself to those disorders of childhood which form, as he says, a large proportion of their ailments. He is thorough, concise, and practical, dealing with the hygiene as well as the therapeutics of his subject.

LECTURES ON DIETETICS AND DYSPEPSIA. By SIR WILLIAM ROBERTS, M.D. London: Smith, Elder & Co. New York: G. P. Putnam's Sons. 1886.

DR. ROBERTS' lectures are exceedingly interesting, both in matter and in style. The record of experiments to show the retarding influence of tea, coffee, liquors, and the condiments upon the digestion, if not offering conclusive proof of the effects of the same in the body, is at once instructive and suggestive. These dietetic accessories are proven by him to hinder starch digestion, a not undesirable result, he thinks, since, he says, the preparation of food of civilized races has been carried to a high degree, rendering it so digestible that it is better to retard digestion, which man has come instinctively to do by means of these articles. The theory is an ingenious one, if not plausible.

PUERPERAL CONVALESCENCE AND THE DISEASES OF THE PUERPERAL PERIOD. By JOSEPH KUCHER, M.D. New York: J. H. Vail & Co. 1886.

THE author of the unpretentious little volume before us has rendered an unequivocal service to the medical profession of this country. Within the narrow compass of 311 pages he has succeeded in presenting to the reader an excellent and reliable account of the management of normal childbed, as well as of the various disturbances that may complicate the lying-in period. Avoiding as much as possible the discussion of theoretical problems, he proceeds at once to give us all those practical details of managing the critical period in question, upon which ordinary text-books insist so little, and upon which success so much depends. Dr. Kucher has absolute faith in the utility, nay more, in the necessity of strict attention to cleanliness and asepsis. And certainly, if we examine the results obtained by him in an extended experience, including four years' service at the Vienna lying-in hospital, we are compelled to admit that his system makes an excellent showing. The cardinal point of Kucher's simple plan of preventing puerperal diseases consists in painstaking local disinfection of the genital organs and everything that is to come in contact with them. Experience has shown that complete disinfection can be effected by cleanliness, and the use of any ordinary antiseptic lotion. Personally, the author still favors a three or five per cent. watery solution of carbolic acid, but we are pleased to perceive that he does not insist upon this, nor any other particular all-powerful and no-safety-without-it kind of fluid or antiseptic apparatus.

Dr. Kucher does not believe in allowing nurses too much rope. When sponging is needed, he himself does it. For the nurse, the patient's genitals are a *noli me tangere*. Dr. Kucher never forgets that the practitioner must shoulder the responsibility of his cases, and he, therefore, permits no dallying by others with what is strictly his personal affair.

We heartily recommend this volume to the study especially of the younger members of the profession. They will, it is to be hoped, not fail to make the methods of the author their own, and in so doing they will act with justice to their patients, and doubtless also with benefit to themselves, so far as concerns their reputations as successful practitioners.

ILLUSTRATIONS OF UNCONSCIOUS MEMORY IN DISEASE. Including a Theory of Alteratives. By CHARLES CREIGHTON, M.D. Pp. 212. New York: J. H. Vail, & Co. 1886.

MEMORY, which used to be described as a special faculty of the mind, is now known to be in reality a general function of all organized matter. Our organic functions are carried on automatically by virtue of this power of memorizing possessed by their controlling centres, and our personal habits as well as tissue habits are similarly the results of unconscious memories. Disease may, and does often, result from the establishment of a bad habit in the tissue, and this bad habit is contracted because an abnormal impression, made perhaps many times upon it, finally is memorized and made permanent. Alterative, drugs break up this bad tissue-habit, and destroy the memory of the impressions made. Alterative drugs, are therefore, habit-breaking drugs. Such are the main features of Dr. Creighton's book, which is an extremely interesting and suggestive one. For our part, we believe that the author has more than a theory, he enunciates a doctrine, and it is one which medical men should understand.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Pp. 483. 1885.

THIS voluminous public document contains much interesting information, and affords evidence that the public servants to whom are intrusted the matters which pertain to the health have not been idle during the past year. Indeed, they must have been very diligent. They have inspected car stables, malarial swamps, fever districts, infected rags, looked after trichinized hams, planned systems of drainage for small towns, and prepared for the cholera epidemic. The book is well larded with diagrams and elevations, showing all sorts of things in connection with hygienic affairs. The grubbers for statistics will find here their annual rations. All this great and varied work has been done for New York State for $21,971.36.

SECOND ANNUAL REPORT OF THE BOARD OF HEALTH OF SYRACUSE, N. Y.

THIS report shows that great diligence in sanitary matters is being exercised by the city of Syracuse and its health officers.

A SYSTEM OF PRACTICAL MEDICINE, by American Authors. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Volume III. Diseases of the Respiratory, Circulatory, and Hæmatopoietic Systems. Volume IV. Diseases of the Genito-urinary and Cutaneous Systems. Medical Ophthalmology and Otology. Philadelphia: Lea Brothers & Co. 1886.

THE third volume of Pepper's System, covering the subjects of diseases of the respiratory and circulatory organs, we regard as one of the best, and perhaps the most uniformly excellent, of the series. The number of gentlemen concerned in producing this volume is quite large, and embraces many who are widely known as experts in their departments. Among the articles which one will turn to with special interest is that on Phthisis, by the lamented Flint. It reveals the judicious mind, and the painstaking methods of labor characteristic of all that author's writings. It contains, however, nothing new, and is deficient in its references to the recent modes of treatment by inhalations and "cramming."

One of the best series of articles is that by Dr. Frank Donaldson, on diseases of the pleura; and another very complete series is that on diseases of the heart and blood, by Dr. William Osler.

The subject of diseases of the nasal passages and larynx occupies nearly two hundred pages, and we should have consequently a tolerably complete and compact treatise on rhinology and laryngology. We fear the reader may be a little disappointed, however, on account of the limited space devoted to technique. Dr. Allen will be accused also of laying too little stress upon the value of the Jarvis snare, cocaine, and the galvano cautery in chronic nasal disease. Dr. Jacobi treats of the subject of pseudo-membranous laryngitis with thoroughness and good judgment. He is, of course, a unicist in the question of croup and diphtheria. He doubts the utility of the present "intubation" fashion.

Volume fourth covers the subject of genito-urinary diseases and the specialties of gynecology, ophthalmology, otology, and dermatology.

Dr. Edes writes an interesting article on functional albuminuria, and Dr. Delafield's presentation of the subject of Bright's disease is as concise, clear, and practical as it is possible to make that still much obscured topic. Nearly four hundred pages are devoted to gynecology, the contributors being Drs. Goodale, E. C. Dudley, Engelmann, Reeve, Thomas, E. W. Jenks, Byford, Baer, and Skene. Dr. Dudley has given a very good description of uterine displacements, but his attempt to introduce the clumsy terms "anti-location," "retro-location," etc., we regard as unnecessary and unfortunate. Dr. Goodale's articles on diseases of the ovaries and oviducts give a very sensible presentation of this subject. We cannot, however, agree with the roseate view taken by the author regarding the condition of the women who have been spayed. Battey's operation, he says, in nowise unsexes a woman, or changes her appearance or character. "Her sexual organs continue excitable," and "she is no less a mother or a wife." Dr. Baer devotes two long articles to perimetritis and parametritis, diseases which he thinks can, and should be, distinguished. A very useful and much needed chapter is that by Dr. Jaggard, on the disorders of pregnancy. Dr. Engelmann's article on abortion also collects together a good deal that is of interest, and supplies a gap in our literature.

Under the head of "Diseases of the Muscular System" we find articles on myalgia, progressive muscular atrophy, and pseudo-hypertrophic paralysis. It was, perhaps, subsequent to the projection of this system that the insufficiency and incorrectness of such a division has been shown. It can, therefore, be excused. Dr. Tyson's article on progressive muscular atrophy is an excellent one, and only lacks in this, that it does not bring out so sharply as it should the fact that this disease is one of the spinal cord, and not of the muscles. On the other hand, it is known evidently to Dr. Putnam-Jacobi that pseudo-hypertrophic paralysis is only one of the forms of progressive muscular dystrophy. Dr. Jacobi's article is probably the most learned and complete monograph on the subject extant.

The articles on diseases of the skin, by Drs. Duhring and Stellwagon, do not call for any criticism, and the same can be said of the articles on medical ophthalmology, by Dr. Norris, and that on medical otology, by Dr. Strawbridge. As will be seen, the last half of this volume is a Philadelphia product, and eminently creditable to that modest city.

THE LAWS AND MECHANICS OF CIRCULATION, WITH THE PRINCIPLE INVOLVED IN ANIMAL MOVEMENT. By WILLIAM H. TRIPLETT, M.D. Pp. 510. New York: J. H. Vail & Co. 1885.

UPON the title-page the author has inscribed the sentiment:

> Was nicht bewiesen ist
> Das braucht man nicht zu glauben.

This absolves the reader from giving an assent to much that is discussed in this book, for many problems considered by Dr. Triplett are from their very nature well-nigh impossible to prove, though it must be confessed that he attacks them in a doughty manner and with a positiveness which does much to carry conviction with it. The student of biological and physiological science will find much to instruct, to interest, and to entertain in its well-illustrated pages.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 1, 1886.

GEO. F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY read a paper (see p. 393) on

CEREBRAL PARALYSIS IN CHILDREN.

DR. L. EMMETT HOLT reported a case as follows:

Charles K——, fourteen months of age, an inmate of the New York Infant Asylum, a healthy, well-nourished child, began, on July 17, 1886, to have loose green movements from the bowels, accompanied by vomiting and quite marked drowsiness. This attack was practically over in four days, during which he had a febrile movement ranging from 99° to 101.2° F.

On July 22d he was asked to see the child, as it seemed very drowsy and stupid without evident cause.

The child lay very quietly in the nurse's lap and made no resistance to the examination. The pupils were a little irregular but responded to light; slight rigidity of the muscles of the back of the neck; face seemed to be drawn to the right side, noticed now for the first time; active movements of the right arm, this used more freely than the left; pulse and respiration regular; temperature, 99° F. No diagnosis was made. There seemed, however, very little ground for believing in any serious brain disease. The child had always been very quiet and good-natured. Ice-bag ordered to be kept to the head.

July 23d.—Temperature, A.M., 99° F.; P.M., 101° F. Drowsiness not quite so marked; pupils a little irregular still; convergent strabismus; eyes bloodshot and watery; right hand and foot in almost constant motion; left side being quiescent. Potass. iodidi, gr. ij., every two hours.

July 24th.—Morning temperature, 100° F.; afternoon, 101.5° F. During the past night at times quite irritable, screamed out, slapped its face, and moved right hand and foot much. At noon Dr. Holt made the following observations: There is complete left hemiplegia. The muscles of the left lower extremity are contracted and rigid. This condition is scarcely noticeable in the upper extremity. Left foot distinctly colder to the touch than the right. Face still drawn to the right side. Pupils more normal, and respond to light. It was difficult to determine the condition of sensibility; anæsthesia certainly was not marked.

When left alone the child was quiet, in a semi-stupor; when disturbed it became quite restless. No coma. Muscles of the neck still rigid; pulse, 120, regular but weak; urine passed freely, bowels open, but no diarrhœa and no vomiting. The child takes nourishment fairly well.

Ordered sodii brom., gr. iv., every two hours, in addition to the iodide.

July 25th.—Temperature, A.M., 100° F. Is not so well; does not use the *right* hand so well; rested quietly during the night; takes nourishment poorly. During the day more restlessness, twisting about the crib; face drawn as if in pain; respirations, 32, regular; pulse, 120, regular and weak. The left foot is moved when pinched, but not voluntarily.

Late in the evening the restlessness became much increased, almost constant motion of the right arm and leg. Still marked rigidity of the muscles of the neck, less marked of the left leg, and only slight in those of the left arm. The respiration was much disturbed, a complete cessation for about ten seconds, then three or four violent efforts, in which the whole body seemed to participate.

July 26th.—Much worse. Temperature, 104.2° F. at 10 A.M.; deglutition quite difficult. He sank from this time, the respirations being at times rapid and irregular. The temperature continued high, unless reduced by antipyrin, and he died on the morning of July 27th, comatose.

No convulsions were present at any time. The hand and arm continued to be rigid, but it was thought that some voluntary movements were seen in the left leg on the day before death. Dr. Holt did not see the case during the last two days, nor the autopsy.

Only the brain was examined. The following were the observations made: The fontanelle was rather more widely open than usual; not bulging. Cerebro-spinal fluid considerably in excess of the normal, estimated at six ounces. This came mostly from the ventricles. The whole brain-substance was very soft, and on the right side the frontal and parietal lobes broke down into a soft, pultaceous jelly mass. Similar changes were seen over the left hemisphere, though very much less marked. There was no evidence of hemorrhage, and no lymph or pus was seen. The base of the brain was firm and healthy, except the medulla, which did not seem quite as firm as the other parts.

DR. C. L. DANA remarked that Eustace Smith had stated that this condition, as the result of *embolism*, is very rare in children.

DR. L. PUTZEL had had no pathological experience on the subject, although he had seen a large number of these cases, and had always been puzzled as to what they should be attributed. The clinical history had been somewhat like that in the first case reported by Dr. Gibney. He remembered one case occurring in a child eighteen months old, that had a convulsion, became comatose, and at the end of twenty-four hours was hemiplegic on the right side. Dr. Putzel saw the child when it was six years old, and at that time it was extremely bright, although it had exhibited the usual symptoms, such as contracture, etc., and at that time had hemichorea, also epileptic seizures which were quite severe, appearing first upon one side and afterward becoming general. The child was under observation until the age of ten years, and its condition remained practically unchanged. There was also marked atrophy of the limbs; the right arm was an inch shorter than the left, and there was apparently atrophy of the bones of the face as well as the soft parts covering them. In quite a number of cases imbecility or idiocy has followed such acute attacks. In one case, that of a negro child, there was paralysis upon the right side, epileptic attacks developed, and then a peculiar condition in which the child refused to talk. Whether or not the child was aphasic he was unable to say. The child remains irritable, bites at everyone, but at nothing except a human being; is apparently in a rage most of the time, but never talks, although it has a bright expression of the face. Other cases have terminated in idiocy. These have generally developed post-hemiplegic chorea with epilepsy, usually unilateral at first and general afterward. Gowers notices the disease briefly, and says that it is due to thrombosis of the veins which go from the convexity of the brain and empty into the longitudinal sinus. He also claims that this is a frequent lesion; that it is generally secondary to thrombosis of the longitudinal sinus. Dr. Putzel said that, so far as his experience went, he had not seen this condition except in one case, and that was in an adult with acute mania; there was a thrombus in one of these veins.

So far as reading goes he had seen no reference to this lesion, and, moreover, Gowers gives no authority to sustain what he says.

Dr. Putzel thought that it was rather hazardous to attribute these cases to embolism, as the most frequent cause of embolism is not very common in children of that age, yet the disease occurred quite frequently.

DR. KINNICUTT said that his experience of such cases had been wholly a clinical one. He had seen a number during the past ten years, and while in doubt in regard to the exact nature of the lesion, he was inclined to be-

lieve that the clinical phenomena were not due to the same pathological condition in all cases.

He had occasionally seen cases where there was a condition of the heart, *i.e.*, marked valvular disease, which, if it antedated the onset of the attack, might reasonably be considered as the cause of embolism.

He had seen one case, occurring in an adult, in which, at the autopsy, there was a thrombus in a similar situation to that described by Dr. Putzel; the patient was in a condition of dementia at the time of his death.

Dr. E. Darwin Hudson, Jr., said, with reference to the general cause of temporary hemiplegia in children, that he had not been prepared to regard it as due to either cerebral embolism or actual cerebral hemorrhage; but had supposed that the cause was a disturbance of the cerebral circulation, a congestion or hyperæmia, which modified the nutrition of the brain-substance. His reasons for entertaining this view had been that children so exceptionally have any cardiac trouble. Then as to cerebral hemorrhage being the cause, the history, in almost all the cases, is that of the occurrence of initial convulsion, either a single one or a period of continued convulsions, from which the patient has recovered, or following this is a period of partial coma, but not so definite as that produced by an effusion of blood with laceration of the brain-substance. He had been of the impression that the chief etiological factor was congestion.

Dr. Kinnicutt asked if there was any pathological evidence that circumscribed congestion was capable of producing the symptoms met with in this class of cases.

Dr. Hudson said that he was unable to refer to any.

Dr. Kinnicutt said he believed that simple congestion was quite incapable of producing the permanent conditions described by Dr. Gibney.

Dr. Hudson said that he referred to congestion such as might be attended by punctate hemorrhages without rupture of vessels of very much size. The clinical symptoms had not impressed him as being the result of a large effusion of blood.

Dr. Kinnicutt supposed that many had seen cases of cerebral apoplexy where the initial symptoms were not very pronounced, but had been followed by very pronounced hemiplegia, with subsequent contracture, etc. He had, at present, several patients under observation, in whom most pronounced hemiplegia followed slight initial symptoms.

The President remarked that hemiplegia sometimes occurred after traumatism of the skull, developing six or eight days after the injury, where the patients gradually passed into coma with the development of hemiplegia, and he had usually regarded it as due to an inflammatory condition.

Dr. C. L. Dana had records of several cases in which hemiplegia came on gradually without any pronounced seizure. There is one interesting etiological point, and that is with reference to the occurrence of so many of these cases in the convalescence from infective diseases; for instance, after diphtheria, typhoid fever, etc. In such cases there would be a tendency to the occurrence of thrombosis, which would support Gowers' theory that many of these cases are due to thrombosis.

In one case he had seen, the child had a convulsion, and it was probable that the convulsion caused the hemorrhage which subsequently developed the spastic symptoms. A child may from some cause have a convulsion, or convulsions, which produce the congestion that determines meningeal hemorrhage. The statistics published by Dr. McNutt show that all the autopsies gave evidence of meningeal hemorrhage, although her cases were nearly all in very young children.

Dr. Putzel remarked, with regard to the etiology spoken of by Dr. Dana, that is, convulsion producing hemorrhage, that he had seen quite a number of autopsies on children who had died while having a hundred or a hundred and fifty fits daily, and he still had to see cerebral hemorrhage under those circumstances. All that he had ever seen was a slight bloody effusion into the meninges and slight hemorrhages under the capsule of the liver.

Dr. Dana thought that the conditions present in these cases occurring in infants were somewhat different from those which existed in cases of convulsions taking place in children eight or nine years old.

Dr. Holt spoke of the uselessness of electricity in the treatment of these cases.

Dr. Dana had seen one case in which the spastic symptoms were very much improved while the child was taking ergot and iodide of potassium.

Dr. Gibney said, with regard to congestion or hyperæmia being a cause, as mentioned by Dr. Hudson, that he was inclined to agree with Dr. Kinnicutt, that it was not a lesion which can produce these symptoms and the subsequent conditions; the hemiplegia must be dependent upon some other cause.

With regard to convulsions producing cerebral hemorrhage, mentioned by Dr. Dana, he was aware that that was very often suggested and had been so stated, but he was unable to see why an infant's brain should be much more susceptible to such an injury than the brain of a child six or eight years old.

In making up his paper he had omitted the proper mention of Dr. McNutt's valuable contribution, and this had arisen from the fact that his attention had been occupied with the question of polioencephalitis.

So far as treatment was concerned, he did not know of anything which could materially affect the progress of the case. He had had considerable faith in the efficacy of large doses of iodide of potassium, but exactly how it was to act he was unable to say.

The aphasia, according to his experience, passes away after a period varying in length from a few months to a year or so, and finally the patients recover speech very fully.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

DOCTORS AND THE HOLIDAY SEASON—THE PURIFICATION OF LONDON SEWAGE—DIRECT REPRESENTATION OF THE MEDICAL PROFESSION AND THE BIRMINGHAM FIASCO.

London, September 18, 1886.

The dull season continues, most of the medical notabilities being away. I saw Sir James Paget, however, yesterday. Perhaps he is the exception that proves the rule. October will witness the return of most practitioners to town. Some, though, take a more prolonged holiday, as, for instance, one distinguished gynecologist, who leaves town in July not to return till November. One year I saw a written notice on his door to that effect. He has now discontinued this, and perhaps makes arrangements for stray patients, arriving during the holiday season, to be sent on to some junior colleague or friend. This is a very common arrangement on the part of consultants, and many of the younger physicians and surgeons thus derive, if not much pleasure, at any rate some profit, from their stay in London during August and September. It is not uncommon either for their seniors to ask them to undertake their hospital work for them during their own absence, and the experience thus gained in positions of responsibility is not without its value. Of course, only gentlemen approved by the hospital authorities are allowed to take charge, and in the case of in-patient work the selection is usually restricted to the junior members of the hospital staff. I heard a curious story some time since anent the holiday season. A patient came to town to consult a

distinguished medical baronet and found him absent. His butler informed the patient that his master was absent from town. He did not refer the patient to any junior, but remarked, with great indifference: "There's a very good man over the way; his name's ——," indicating, by a jerk of the thumb, the residence of a not less distinguished and titled physician. It can scarcely be supposed that the first physician had given his butler orders to act thus, but from what I have seen of medical flunkeys, I can readily credit the story.

After much preliminary talk the purification of London sewage, before its discharge into the Thames, is, it seems, at last about to be undertaken by the Metropolitan Board of Works. A process of precipitation is proposed. It is estimated that it will be necessary to treat one hundred and fifty million gallons of sewage per day, the weight of the residual pressed sludge being about eight hundred and fifty tons. The sewage effluent is to be further purified by means of permanganates. The Board is about to spend three-fourths of a million (=$3,000,000) in the erection of the necessary works, and it is estimated that the annual cost to the ratepayers will be nearly a hundred and twenty thousand pounds.

Her Majesty's Privy Council have just issued their regulations under the new act for the election of representatives of the registered practitioners in the General Medical Council. Three members are to be elected for England and Wales, one each for Scotland and Ireland. The returning officer is ordered to issue his precepts for election during the week preceding November 13th, and the election must take place within twenty-one days after the receipt of the precept. A certain languid interest in the election has already been elicited, and one or two of the candidates have contrived to secure a considerable number of promises, though others have simply expressed a willingness to serve or published an address. What has excited more attention, and in many quarters indignation, though perhaps much more widely, simple contempt, is an attempt of a party in the British Medical Association to convert themselves into a caucus, with the object of controlling the election. At the Brighton meeting, as already reported in your columns, the members of the Association, when the matter was brought before them, decided that they would not interfere or in any way attempt to use the Association for the purpose of influencing the result. Thereupon certain members of the Council of the Association held a private meeting in their hotel, and formed themselves into a committee for the purpose of doing that which the meeting had refused on their invitation to do. Not much notice was taken of this, save that the Association's journal gave prominence to a report of this proceeding, while an independent journal denounced it as a trick, and pointed out that all those concerned in it were officials of the Association. Nevertheless, the self-elected committee persisted in their action, but, stung by the taunts of cliquism, they issued a circular inviting the co-operation of others, and called another meeting of all willing to join them, for last Tuesday, at Birmingham. They say from upward of a thousand circulars were issued, but I have not been able to see one, nor to find anyone who received it. I fancy, therefore, they were all distributed to country gentlemen of whom the promoters felt sure. At length the day of meeting arrived, and the muster in the Birmingham hotel, in response to the circular as well as advertisements, amounted to the magnificent number of thirty-two! But these did not remain all the time. After a good deal of desultory talk the meeting began to thin, and toward the conclusion, when the only important vote was taken, there were fourteen souls present, of whom eleven voted for, and three against, the proposal before them. This was to take a *plebiscite* of the three hundred and forty persons who had condescended to reply to the circular. These are to be asked, by a post-card, to say which three out of ten, or a dozen, names mentioned at the meeting, shall be supported by the committee. Surely no more complete fiasco could be imagined. The thirty-two persons who met at Birmingham can have no pretence to represent the profession, and have utterly discredited themselves by attempting to put forward their candidates in this unauthorized and underhand manner. There was an attempt to throw dust in the eyes of the few independent men who put in an appearance, by casually mentioning the names of other candidates, but it was obvious that the fourteen who stayed to vote were only concerned to foist upon the profession three members of the Council of the British Medical Association, and to secure for them a position which would make them appear to numerous members as official nominees of the Association. This pretty little conspiracy, although it has been thoroughly joined in by the journal, has so far failed, and has only proved that the wire-pullers in question have utterly discredited themselves.

THE USE OF ANTIPYRETICS IN VIENNA.

To the Editor of The Medical Record.

Sir: Having observed pretty carefully for the last few months the extent to which the above remedies are used here, in Vienna, I send you this brief communication somewhat as a reply to Dr. H. P. Chace's letter, contained in The Medical Record of July 31st. I would say then, first, that after an extended trial antipyrine has been entirely and absolutely discontinued in Professor Nothnagel's wards in the treatment of typhoid fever.

Thallin is being used in a few cases, but only in the milder ones, as he is afraid of it in the more severe forms of the disease; although it has been lately greatly lauded, and even claimed by some writers to be a specific in this disease.

Dr. Gaksch, Professor Nothnagel's assistant, one of the brightest teachers of clinical medicine in Europe, says that we are trying thallin as a simple experiment, and so far it has been of no use in shortening the course of the disease or ameliorating its prominent symptoms.

As a pure and simple antipyretic, he says that the remedy is more powerful than antipyrine, controlling the temperature and at the same time disturbing the patient less. But of the use of antipyretics in general, in the treatment of abdominal typhus, he uses this very strong language:

"During the time we used them here, not only was this disease not shortened in its duration (though we controlled the temperature of the patient), but, on the contrary, it ran a more protracted course, and convalescence was more likely to be complicated by the intervention of a hypostatic pneumonia and other untoward symptoms that arise from a weakened heart."

The antipyrine Nothnagel especially condemns in all febrile diseases that run a protracted course, and that require the patient to be supported.

During some weeks spent in his wards I only saw the remedy prescribed a few times, and that was in cases of acute articular rheumatism of a sthenic type.

Nothnagel says that since Vienna's new water-supply, typhoid fever is nearly unknown here in the city, and says that *all* our cases this spring and summer have been brought here from the surrounding towns. The treatment of typhoid fever, both by Bamberger and Nothnagel, is in the main one of expectancy.

If the temperature does not go above 39° R., there is almost no medicine used. If it runs above that point an occasional cold bath is used, and frequent cold sponging.

Quinine, to the extent of one gramme in the twenty-four hours, given in two doses during the exacerbation of the fever, is about the sum total of drugs given. Nourishment is given freely, consisting of milk and meat soups. No solid food is allowed until the patient is well on the road to convalescence. Stimulants are used after the first week. As bearing on this subject of anti-

pyretics, I cannot refrain from giving you a very brief epitome of a series of articles that lately appeared in the *Wiener Medizinische Blätter*, from the pen of Dr. Weinstein, on the action of thallin. He tried the remedy in croupous pneumonia, erysipelas, tuberçulosis, acute rheumatism, and the puerperal processes.

It was especially to test the virtues of the remedy in typhoid fever that the experiments were made, as Ehrlich and Laquer had lately published their views, putting forward the opinion that the remedy was a specific for this disease. He claims that the lessening of temperature is more imaginary than real, the error coming in this way:

The agent acts by paralyzing the heat-producing centre in the brain; that such paralysis acts most potently on the peripheral nerves, and hence, though you have a decided lowering of the *axillary* temperature, if you test the vagina or rectum you will find the temperature of these parts far less influenced.

The cases of pneumonia treated did especially badly, and he leaves the impression on the reader's mind that two of the cases that died might have recovered under more favorable and rational management. He winds up by saying that he believes that antipyretics should be stricken from our pharmacopœias. He says:

"Observe the calm, easy quiet of your patient whom you have sponged or bathed in case of typhoid fever, as contrasting with his condition after you have lowered his temperature by giving either thallin, antipyrine, kairin, resorcin, and the like. In the last case you will be likely to see him with an anxious look, bathed with a cold sweat, and perhaps have to give him stimulants to prevent an impending collapse."

Professor Breisky, after a fair trial, condemns in most positive terms the use of antipyrine in childbed fever. The case of Dr. Chase, cited in THE MEDICAL RECORD, can only be explained on the supposition that his patient had some peculiar idiosyncrasy that is certainly very uncommon, but in this case causing the antipyrine to act as a hypnotic. I have used the remedy in my own practice extensively, in most forms of disease that have fallen under my observation, and which are accompanied by a high temperature. The remedy in my hands has never appeared to act as a curative agent, and has often been followed, even when given in moderate doses, by such unpleasant symptoms as to oblige me to discontinue its use.

W. S. CALDWELL, M.D.

VIENNA, AUSTRIA, August 16, 1886.

WHAT CAN WE CURE?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: After reading the article of Dr. Dewey, in the issue of THE MEDICAL RECORD of August 21st, one might, if he accepted the theory therein implied, conclude that the above query can be answered in one word—nothing—and that the thousands who have the honor to pursue the noblest calling that God vouchsafes to man, have been hitherto, and are still, following an *ignis fatuus*.

Happily, however, the majority of the profession will not accept this teaching without a word of dissent.

"A doctor's faith in physic" may be "the measure of his intellect," but it is by no means always in inverse proportion thereto. There is a limit to this rule of measurement, and the line of limitation must be drawn at scientific and judicious medication, which is practised by the better class of physicians of the day, and does not eschew the intelligent use of the products of physiological research and clinical experience.

That "countless millions" live and die "undoctored and undrugged" is no evidence that drugs are a delusion; nor is the fact that "we give out at threescore and ten" proof positive that physic is a farce.

There is, indeed, a great difference between the medical text-books of the present time and those published a hundred years ago, and it is true that the portion devoted to the therapeutics of disease is but meagre compared to the lines relating to diagnosis and pathology. This is as it should be, but it does not follow that our ability to cure disease has decreased commensurately with the literature descriptive of the treatment thereof.

Specifics innumerable have ceased to work their noxious influences on the human race, and been buried with the ignorance of past ages, but that fact does not detract from our power of cure. On the contrary, it greatly enhances it.

Lithotriptics are defunct, 'tis true, and so, perhaps, are many of the poor unfortunates upon whom they were used; but their decease does not lessen our control over "stone in the bladder," which to-day is readily cured by the surgeon.

Emmenagogues have followed in the wake of lithotriptics, and it is now universally acknowledged that no drug has power *per se* to produce the menstrual flow. Science, in its ever onward march, has taught us that the condition for which emmenagogues were formerly employed—amenorrhœa—is but a symptom, and it is relegated to the domain of gynecology, where it is treated with intelligence, skill, and generally success

> By men who have, as yet, not come
> To fear the use of speculum;
> Which, wisely used, it may be said,
> Is naught of harm to any maid.
>
> But e'en though specula have the power
> A modest maiden to deflour,
> 'Tis better far thus to escape,
> Than be the subject of a rape.

Though there is no evidence that the so-called expectorants have any inherent power of "lung hunting" and loosening the products of inflammation, it is a pretty well established fact that the ammonium salts are eliminated by the lungs, and it is not at all improbable that in escaping they greatly aid nature in her efforts to liquefy and expel such products.

Medicine was never intended to be at strife with nature, but rather to supplement and aid the latter in her efforts; and surely, if by the use of drugs we can enable nature to effect a cure which she could not have accomplished unaided, we may justly claim the honor of the cure for the remedy employed.

Of the inutility of the majority of the drugs described in "The United States Dispensatory" there can be no doubt, and the probability is that we would get along just as well if nine-tenths of them should find a resting-place in the sea; but, while we have no elixir vitæ by the use of which we can promise eternal life and immunity from all disease, we have certain medicines which can, and do, cure diseased conditions, and, because of their comparative scarcity, they should be the more highly esteemed and extolled.

If we accept this reasoning we have an incentive to work, and are encouraged to pursue that research which has already given to us opium, quinia, ether, chloroform, and other medicines which have enabled us to mitigate suffering, calm excitement, induce repose, and perform, without a particle of pain to the patient, such operations, followed by cure, as would have been impossible without them; and it is not unreasonable to hope that future investigation may reveal to us remedies as potent against typhoid, measles, scarlatina, and others of the exanthemata as quinia is in ague. If, on the other hand, convinced of the fallacy of the old system of large and frequent dosing, we descend to the opposite extreme of allowing nature, undisputed and unaided, to continue on in "the even tenor of her way," we are nursing an error equally pernicious as the former, and might better return to the old days of "ten and ten," and indiscriminate bleeding, or else take in our signs, cast our knowledge to the winds, and end the calling to which we have become apostate.

J. H. CARMAN, M.D.

PLAINFIELD, N. J., August 27, 1886.

A FEW MORE WORDS REGARDING THE DEATH PENALTY AND THE MODE OF INFLICTION.

To the Editor of The Medical Record.

Sir: I have read with much interest the articles of July 24th, and August 21st, regarding capital punishment.

The "conclusions" in the article of August 21st are what I desire to consider in the present article.

We should never forget the fact that most of the juries in murder trials (as well as in all jury cases) are composed of (not medical men) men of no great intelligence, and those who believe vivisection to be a crime when nothing but cats, useless dogs, rabbits, or guinea-pigs are used. Now if, therefore, we judge as his words say, "by the horror which people in general have of vivisection," would such a jury be liable to convict a man of murder in the first degree when they realized the penalty was death by such "a terrible ending" as the article in question designates the *murderer's* idea of it to be? It would seem, from public opinion as daily expressed, that the majority of juries in murder trials would convict a man of murder much quicker were the penalty "that he be drawn in twain in the stocks," than if it were that he be "turned over to the mercy of vivisectionists."

We will now turn to the murderer.

It cannot be possible that men contemplating murder can ever stop to think of the penalty. Did they do so, how many would commit the foul deed?

Further, those who have committed murder do not have time to think of the penalty, or if they did think of it would drop that part of their thoughts at once and turn their whole attention to a means of release. But then, what person contemplating murder, or who may have committed the crime, should he ever think of the penalty, would not prefer that his sentence (provided he had to suffer the extreme of the law) be that he "be placed on a table, and at the hands of three or four physicians and in the presence of a government committee of three or four, he be quietly put to sleep and the anæsthetic finally carried to the extent of producing death," rather than that he "hang by the neck till he is dead, dead, dead." Though a man ought to care but little for his own body when he can be so vile as to mutilate the body of another human being and destroy life, when the work on his own body is to be done when he is, to all intents and purposes, dead.

I can but believe that all means that lessen pain, torture, publicity, and disgrace of capital punishment will tend to increase the number of murders. It is therefore apparent, if chloroform were to be the means of inflicting the death penalty, there would be more murders; and if vivisection were to be practised on a criminal, there would be less murderers sentenced to death, and that the average jury would look at the death penalty carried out in that way as a crime against a criminal.

F. E. Maine, M.D.

Auburn, N. Y.

ICE-CREAM POISONING.

To the Editor of The Medical Record.

Sir: After reading several articles in The Medical Record on ice-cream poisoning, I would like to take exception to Dr. Morrow's "vanillism," and Dr. Kales' "gorging himself and best girl"—in the first instance, because I have known patients to have precisely the same symptoms from eating lemon ice-cream, and in the second, I have seen very sick patients from eating only part of a plate of the cream, or ice-cream with a glass of lemonade or a cup of coffee.

My experience seems more in accord with Professor Vaughan's tyrotoxicon.

On the evening of July 6th, the M. E. Society in this place held a lawn festival with ice-cream, coffee, cake, etc. About two hours later, some seventy-five persons were suffering more or less from some gastro-intestinal irritant; the symptoms were about the same as described by Dr. Moffit, except that there were less bone pains, and more cramping and griping; and in severe cases, after throwing up the contents of the stomach, they vomited a slimy matter with a decided odor of fresh fish. This fish odor was not the exception, but the rule in bad cases. Two of the patients I attended vomited blood and passed blood in the stools; there were no fatal cases.

The amount of cream eaten, and the flavoring, seemed to make very little, if any, difference with the degree of illness, and one great peculiarity was that a few were not affected in the least. I ate a plate of the cream in the evening, and about two o'clock the next morning, after seeing a very sick patient who had had some of the cream brought to the house, and of which the family had eaten not a great while after their regular tea, I ate five or six teaspoonfuls of the same cream, which was then warm, and felt no bad effects whatever.

Now, as to how the cream was made. I would first say July 4th, 5th, and 6th were very warm. Monday evening, July 5th, the custards were cooked, made from Monday morning's cream, and Monday night's milk boiled in a tin pan that had had the bright tin worn off. It was noticed that one pan of cream was *not sweet*, but thinking it would make no difference, it was used; the freezers were thoroughly cleaned and scalded, and the custards put in the same evening while hot; the cream was frozen Tuesday afternoon, having stood in the freezers since the night before, when the weather was very warm; the flavoring used was the same as is used every week by the ice-cream maker in this village; the cream when frozen was poor stuff.

To my mind, that cream had undergone some chemical change, and if it was not tyrotoxicon it was something else of the same nature; it was not vanillism, for some ate lemon cream, and it was not gorging with indigestibles, for some had eaten nothing but cream, and but very little of that.

Why a few were not affected I do not pretend to explain.

Charles S. Allaben, M.D.

Gilbertsville, N. Y.

IS THERE AIR WITHOUT GERMS?

To the Editor of The Medical Record.

Sir: In your issue of July 24th is an article by Dr. G. W. McCaskey, of Fort Wayne, Ind., who seems to be surprised that any one should think there is air without germs. He was, furthermore, thrown into a fit of professional horror on account of my antagonism to the present extreme theories of the bacteriologists. Dr. McCaskey has been put to considerable trouble to tell us what has been freely published in the medical and lay press for many years, viz., that experiments in the polluted atmosphere of London, Liverpool, and Paris had proved beyond question the existence of germs in large numbers. I do not care to go into the *various text-books* to make an article, but I simply want to say just what my clinical experience has led me to believe to be a fact. I distinctly stated in my paper on cataract, that I thought some form of antisepsis in the hospitals was absolutely demanded; but that, in the air of an ordinarily healthy country locality, I believed disinfection to be unnecessary, and, as far as the eye is concerned, sometimes even harmful. In using the expression, "there is bread that hath leaven, and air as well, without germs," of course I employed it in a figurative sense, and in saying that there was "air without germs," I supposed the intelligence of the profession would construe it in a relative way. I do not argue that there is not in *all air a microscopic character of some kind* (call it a germ if you wish), but I deny that there *exists in all space a special pyogenic germ*, which, if allowed to come in contact with cut surfaces, will lead to a special disturbance. Is it possible that the atmosphere of the entire world is filled with myriads of

germs of the latter description? I do not believe it. The plain question to be discussed is not to be evaded by parading the high-sounding polysyllabic terms of the microscopists as an answer. Common-sense observation of the behavior of wounds under various conditions, and the practical results of such wounds are worth more in determining the value of the different modes of treatment than all the theoretical bombast that Dr. McCaskey can compile. Theories, however plausible, are not to be weighed against judicial conclusions drawn from a series of cases. Let every surgeon keep a record of his cases and the mode of treatment, and it will not be long before statistics will settle the question whether there is, outside of the hospitals, in all ordinarily healthy localities, a poison in the air, which, if brought in contact with wounds will be either the cause of their sickness or their death. Again, I say that my clinical experience in this part of the country leads me to believe that such a poison does not exist. Dr. McCaskey says in one place, "It is also certain that if there is any germinal matter in the air, its introduction into wounds may vary from the slightest disturbance to the death of the patient." A little farther on he says: "Of course all germs are not pyogenic." Why, certainly not; and this is a part of my argument, for who cares for a non-pyogenic germ. Yet I guess he will contend that these are the kind of germs that surrounded my patients. "Were it not for the introduction of germs all wounds would heal without suppuration," says Dr. McCaskey. Indeed; but I reported twenty-five successive extractions of cataract without a failure, and all performed in an atmosphere in which, according to the doctor, there must have been millions of germs to the square inch, with no precaution except clean hands and clean instruments. There was not the slightest suppuration in any case, and as there can be "no pus without a microbe," I must ask where was the microbe? Is it possible that each and every time the omnipresent microbe lost a splendid opportunity to slip into the wound, or is it just possible that each and every time it so happened that a eunuch—the non-pyogenic microbe—was the only unlucky invader. Pooh-pooh to the eunuch microbe.

Now let us be honest with the microbe, but honest as well with ourselves, and in observing and recording our cases do let us tell just how they appear to us, unbiassed by the opinion of anyone else. Honest observations, courageous expressions of opinion, and accurate tabulation of results will do a great deal toward putting surgery on a strictly reliable basis. For my part, I intend to tell it as I see it. Dr. McCaskey refers to the brilliant results obtained by Mr. Lawson Tait, and says this shows what is possible by a strict and scientific regard for cleanliness. Undoubtedly true, and this is the fundamental rock of my argument. Dr. McCaskey, however, does not have the courage to admit that Tait's success is an irreparable blow to disinfection and the germ-theory. Cleanliness will not keep a microbe out of the abdominal cavity if the air which circulates in it (through the incision) is laden with millions of them; but perhaps this is another instance where only the eunuch microbe gained access. Tait had one hundred and thirty-nine ovariotomies without a death, and he not only let this deadly air into the abdominal cavity, but he washed it out with ordinary lukewarm Birmingham water. Oh! horrors! horrors! Was the air which circulated through the abdominal cavity disinfected? No. Did the water, which touched every part of this sensitively lined cavity, contain any germicide? No.

Another blow to the microbe. What will Dr. McCaskey think of Le Fort, who has lately left amputated surfaces exposed to the air in the Hôtel Dieu and Beaufort without the slightest interruption of the process of cicatrization, or the development of any constitutional disturbances. Rose, of Zurich, has also lately left amputated surfaces exposed to the air without the slightest detriment; while Billroth, at the same time, and with identical hygienic conditions, had results less fortunate, although he invoked every possible antiseptic precaution. These are facts which the bacteriophobists must solve. Now, I don't care what the bacteriologists claim, for they claim a special bacterium for every disease, but I do insist that they bring forward clinical facts to sustain their fascinating theories. I, for one, do not care to swallow, without masticating, each new-hatched theory of the German laboratory. I do not underrate the grand achievements of those prodigious workers, but many of their theories have been so fleeting and fast-coming that it is more practical to wait until they have been reliably accepted as established facts. A few years ago it was all carbolic spray; now it is something else; next year will it not be another? The ephemeral character of the popular germicide is in itself an argument against its usefulness, a proof of its instability. It reminds me very much of the reign of a society belle at a fashionable watering resort, who, after flirting with her admirers leaves for other fields, and is supplanted by one of her kind, who, at her first coming is considered just as beautiful, equally attractive, and serves fully as well.

A few years ago I attended, one night, while in London, the famous old London Medical Society. Many of the distinguished men of that great city were present. Listerism was in its glory. Hissing, bubbling, carbolized steam filled the rooms and wards of every hospital. Keith feared no more deaths from ovariotomies; Sir Spencer Wells was happy; while Hutchison, Bryant, and others were content in that they saw no more suppuration and no more surgical death. The discussion struck, finally, the absorbing question—Listerism (the spray)—and was conducted in an honest, brilliant, spirited, and aggressive style. The brave and distinguished Gamgee was the target toward which a vigorous argument was directed. Gamgee said he did not believe in Listerism, and predicted its death in a few years. To him Listerism was as a tankard of ale, mustard, and spice to a piece of roasted English mutton. "It gave a flavor, tickled the palate, and pleased the fancy." Where is Listerism now? Was Gamgee right? It seems so. There are others very high in authority, I must inform Dr. McCaskey, who do not accept every claim of the bacteriologists. What does he think of M. Peter and his followers, in the Academy of Medicine of Paris, who regard the microbes of all shapes incapable of setting up diseased action in any of the tissues. What of the distinguished and zealous worker, M. Michel, who says: "They who thus ascribe the origin of disease to these micro-organisms are constrained to find a special bacteria for every particular disease. So far from doing harm, I believe them to do good. They stand like sentinels on the confines of organic life." What of Hiram Corson, of Conshohocken, Pa., who says, in closing his admirable monograph on three thousand and thirty-six cases of labor (only losing six out of this number from anything like septicæmic trouble): "Puerperal fever is a disease exceedingly rare in the country. If it is caused by the germs, which are so guarded against in cities, and especially in hospitals, they are inactive, if they exist at all, in the country; and, therefore, the directions so urged by Dr. Elliott, Carl Braum, and others, are not needed with us." Let us know the truth about the microbe, but let us know the whole truth. *When that is known, I am satisfied the verdict will be that there is air without harmful germs.*

BENJAMIN J. BALDWIN, M.D.

MONTGOMERY, ALA., August, 1886.

THE ANTIQUITY OF INGLUVINE.—Dr. Lambuth states that ingluvine, which at one time threatened to enjoy quite a popularity as a specific for vomiting, has been in use in China for over a thousand years. It is, however, still used in the same crude form in which it was first prescribed.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 26 to October 2, 1886.

BACHE, DALLAS, Major and Surgeon. Granted leave of absence for twenty-five days, to take effect on or about October 2, 1886. S. O. 143, Division of the Atlantic, September 24, 1886.

GIBSON, JOSEPH R., Major and Surgeon. Granted leave of absence for two months, from September 25, 1886, on Surgeon's certificate of disability, in lieu of the unexpired portion of the ordinary leave of absence granted him in S. O. 158, A. G. O., July 10, 1886. S. O. 227, A. G. O., September 30, 1886.

GARDNER, WILLIAM H., Major and Surgeon. Ordered from Department of Texas to the Department of the East. S. O. 227, A. G. O., September 30, 1886.

APPEL, DANIEL M., Captain and Assistant Surgeon. Assigned to duty at Fort Davis, Tex. S. O. 133, Department of Texas, September 22, 1886.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. Leave of absence extended to include November 5, 1886. S. O. 226, A. G. O., September 29, 1886.

KENDALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 81, Division of the Pacific, September 24, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Ordered for temporary duty at Fort Verde, Arizona Ter. S. O. 90, Department of Arizona, September 20, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 2, 1886.

GUITERAS, D. M., Passed Assistant Surgeon. To Receiving Ship Franklin for temporary duty. October 3, 1886.

WENTWORTH, A. R., Assistant Surgeon. Detached from Navy Yard, League Island, and to the United States Ship Galena. October 1, 1886.

SCOTT, H. B., Assistant Surgeon. Ordered to Navy Yard, New York. October 1, 1886.

ASHBRIDGE, RICHARD, Passed Assistant Surgeon. Detached from the United States Ship Swatara, October 1, 1886. Granted six months' leave.

BERRYHILL, T. A., Assistant Surgeon. Detached from the Museum of Hygiene and ordered to Receiving Ship Minnesota.

ARTHUR, GEORGE, Passed Assistant Surgeon. Detached from the Navy Yard, New York, and ordered to the Museum of Hygiene.

PERCY, H. T., Passed Assistant Surgeon. Detached from the United States Ship Galena. Proceed home and wait orders.

SHAFER, JOSEPH, Assistant Surgeon. Detached from the United States Ship Minnesota and ordered to the United States Ship Swatara.

STEELE, J. M., Passed Assistant Surgeon. Detached from Naval Academy, and granted six months' leave.

BIDDLE, CLEMENT, Passed Assistant Surgeon. Ordered to Naval Academy, Annapolis, Md.

THE NICOLAS MILITARY HOSPITAL in St. Petersburg has now a special department for the treatment of diseases by massage, and also a training-school for the instruction of nurses in the method of giving massage.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 2, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	32	13
Scarlet fever	21	2
Cerebro-spinal meningitis	5	5
Measles	44	3
Diphtheria	48	22
Small-pox	0	0
Yellow fever	0	0

THE USES OF CREASOTE.—Creasote is the subject of a very interesting paper in *La France Médicale.* After treating of its history and chemical nature, its therapeutics as an antiseptic, parasiticide, and caustic are enumerated, and several formulæ are given, from which the following are taken:

℞. Creasote ..... 1 part.
Water ..... 100 parts.
M. Ft. sol. As a wash for ulcers.

℞. Creasote ..... 1 part.
Lard ..... 15 parts.
Ft. ungt. An ointment for fetid ulcers.

℞. Creasote ..... 3 drops.
Water ..... 90 grammes.
Orange-flower water ..... 30 grammes.
Essence of citron ..... 2 drops
M. Ft. mist. A teaspoonful every two hours, in typhoid fever.

℞. Creasote ..... 1 part.
Cod-liver oil ..... 150 parts.
M. Ft. mist. A teaspoonful daily in phthisis.

INFANT FOODS AND THE NEW YORK FOUNDLING ASYLUM.—In the New York Foundling Asylum every effort is made to employ wet-nurses for the foundlings, but a considerable number are necessarily bottle-fed. These are placed in a ward which is known among the employés of the asylum as the ward of the "*dying babies.*" Many agents of proprietary foods have been allowed to make trial of their preparations in this ward, but no one has thus far published the result, for it has been uniformly one of failure. In all the institutions in and about New York where infants are bottle-fed the result has been similar, establishing the fact that an inappropriate and faulty diet is the common cause of indigestion and diarrhœa in infants.—DR. J. LEWIS SMITH in *Archives of Pediatrics.*

POLITICAL METHODS OF MEDICAL CANDIDATES.—There is to be an election in November of three representatives of the medical practitioners of England and Wales in the General Medical Council. Several candidates have already appeared in the field. One of them is going to work as for a parliamentary election. Not only has he formed a large committee and issued an address, but committee-rooms have been hired and a treasurer appointed. The expenses incurred already are large, and the object of appointing a treasurer is doubtless to have some one to take charge of the proceeds obtained by "sending the hat round," a process which will probably be soon resorted to.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE has just held its meeting at Birmingham, and in some of the sections matters of medical interest have been discussed. A rather striking paper was read by Mr. Crookes, F.R.S., in the chemical section. He stated, in definite terms, a speculation which has doubt-

less passed through the minds of many chemical students, viz., that the elements might all be traced back to a single substance from which they have been gradually developed. He proposed to call the one primordial substance "protyle," a word coined by him to correspond with the protoplasm of the biologists. Professor Carnelley read a paper on the air of dwellings and schools in relation to diseases. He had found the organic matter and carbonic acid of outside air much lower in suburban than in town air, and the organic matter and micro-organisms less during the night than the day. In dwellings he found the air became more and more impure, and the death-rate greater, as he passed from four to three, two, and one-roomed houses. This is what studies in sanitary science would have led us to expect.

THE STATUS OF DENTISTS IN ENGLAND. — The recent meeting of the British Dental Association has drawn the attention of members of the medical profession to their dental cousins. Dentistry and medicine are much nearer together now than they were before the passing of the Dental Act. That Act of Parliament, although (by the clause recognizing as dentists all those in actual practice as such at the time the Act passed) it admitted an army of irregulars to the dental register, yet did good for the future by providing that henceforth no dentist should be allowed to practise until he had not only been through a proper course of study (including apprenticeship to a dental practitioner and attendance at a dental hospital), but passed satisfactory examinations. Dentistry as a profession may be said to be "looking up" in Great Britain. The status of its practitioners is decidedly better than formerly, and by a dentist the public now understand someone who knows something besides how to "draw teeth." Among the dental practitioners in the metropolis are several highly-qualified medical men, who, originally designed for the medical profession, afterward forsook it to restrict themselves to dental work solely. More than one university graduate in medicine has done this, and among the odontologists are several Fellows of the College of Surgeons. It is by no means uncommon now for a dental student to prolong his curriculum somewhat and obtain a surgical, as well as a dental, diploma. (None of our universities give a degree in dentistry like the D.D.S. of the States.) At the recent Dental Congress it was strongly urged in one of the papers read that not merely a few, but all dental students should be encouraged to go through a full course of medical study, and become qualified in medicine and surgery.

THE UNSANITARY CONDITION OF A LONDON HOSPITAL.—St. Mary's Hospital in London was inspected in 1875 by a distinguished authority on hygiene, and many defects were detected and corrected, and it was then supposed that the building was in as nearly perfect a sanitary condition as it was possible to make it. But now it has been found that the drains were badly laid. Some of them are so placed that in flowing round from the back to the front of the building the sewage has to turn two awkward corners in the pipes, and what is perhaps worst of all, the fall is utterly inadequate—only about a foot in the whole distance. On opening the pipes stagnation of sewage in them has naturally been found. It is proposed to remedy this fault at once, but it is thought strange that it was not detected and removed eleven years ago.

AN EXAMPLE FOR OTHER DOCTORS TO FOLLOW.—An amusing story is told of two practitioners in a small town in England who held radically opposite views concerning the hygienic management of typhoid fever. While Dr. A. closed all the windows in his patients' rooms so as to obviate the slightest danger of a chill, Dr. B. held that fresh air was absolutely necessary. An epidemic broke out in the neighborhood, and each doctor regulated the ventilation of his patients' rooms on his own theory. There were often in one street patients belonging to each doctor. A walk down the street sufficed to point out the houses where each had patients. Where Dr. A. had a patient the windows were all closed, where Dr. B. had one they were all open. Nevertheless, the doctors were very good friends and agreed to differ. Dr. A., if asked whether he did not consider Dr. B.'s plan of opening all the windows very bad practice, would reply that it was all very well for Dr. B. to do so but that it did not do for him (Dr. A.) to adopt the plan. At last Dr. B. fell ill himself with the fever, and sent for his colleague to attend him. "There, now," said everyone, "there's a patient who won't shut his windows for Dr. A.—Dr. B. won't, I'm sure." However, on visiting his patient, Dr. A. quietly ordered all the windows to be closed, and closed they were during Dr. B.'s illness. When the latter was reproached for abandoning his theory in his own case, he said: "Well, it didn't do for his own patients to have all their windows shut, but it did for Dr. A.'s patients, and he was one of the latter and must act accordingly."

This story is vouched for by a correspondent as having been of actual occurrence.

A CHINESE SUBSTITUTE FOR COCAINE.—In the third annual report of the Soochow Hospital Dr. W. R. Lambuth relates a case in which he used cocaine in an operation for extraction of a foreign body from the eye, much to the amazement of the friends of the patient and others. A native surgeon who happened to be in the hospital under treatment at the time was not so much impressed, and said that the Chinese had a similar anæsthetic the chief ingredient of which was "frog-eye juice." Upon his recovery he endeavored to make his assertion good, and, after a long search among the wholesale drug-stores of Soochow, returned with a small, hard cake resembling beeswax, but harder, darker, and semi-transparent. This cake was cut into pieces and soaked some hours in water, together with a small white woody excrescence found growing upon the knot of some tree. After twenty-four hours the preparation was ready for use, and upon trial, Dr. Lambert says it was certainly found to have anæsthetic properties. The tongue and lips became quite numb when it was applied to them, and a finger immersed for some minutes in the solution lost sensation to the extent that a needle could be thrust into the end of it without pain. The surgeon, as well as others, insisted that the anæsthetic property lay in the juice of the frog's eye, and did not depend so much upon the other ingredient. The writer states that he has since found that the drug is widely known in China, though little used.

SHIP ISLAND QUARANTINE.—Dr. C. Beard, of Boston, referring to a recent item in these columns concerning yellow fever at Ship Island Quarantine, New Orleans, writes: "This is quite as *good* as would be the information that a vessel similarly conditioned had invaded Fire Island, Brooklyn, and nearly as instructive. Ship Island, the seat of the United States Quarantine Station, is situated about sixteen miles off the coast of Mississippi, in the Gulf of Mexico, and is eighty miles as the crow flies from New Orleans. Surely that city is unfortunate enough as to sanitary reputation abroad, without 'piling on' all the infectious diseases that fate or a fair wind may cause to lodge at the extreme end of such a radius."

ANTIPYRINE IN PNEUMONIA.—Dr. W. A. Howard, of Waco, Tex., writes: "I desire to call attention to the analgesic and other beneficial effects of antipyrine in pneumonia. I have found it relieve the pain in every instance in which I gave it, and in the majority of cases convalescence commenced from that date. I am confident I have cut short the disease in several instances where it was given during the first stage. The patient usually falls into a deep sleep, awaking much refreshed and improved generally. The soporific effect I had attributed to the analgesia. I find it is, also, an excellent diuretic."

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Original Articles.

SOME PHASES OF CEREBRAL SYPHILIS.[1]

BY JULIUS ALTHAUS, M.D., M.R.C.P.,

CORRESPONDING MEMBER OF NEW YORK ACADEMY OF MEDICINE; SENIOR PHYSICIAN TO HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK, LONDON.

IT is to me a source of the greatest possible gratification to meet in this noble hall, and in the first city of your great continent, so many representatives of American medical science as are assembled here to-night; and you must allow me to thank you most heartily for the very kind and flattering reception which you have accorded to me. For many years past I have wished to cross the Atlantic, in order to make the personal acquaintance of many eminent colleagues who were already well known to me by reputation, and to learn something of the aspects of American medicine in your hospitals and universities. I am not one of those who consider the old world to be effete and played out—sclerosed as it were through loss of nerve-cells and the undue proliferation of the lower tissues—unable to do much further original work, either in our own field of labor or in other cognate departments of research; yet I have felt at once, on my arrival among you, that in this new world of yours, of which I have as yet such a short experience, the air is fresher and keener, the minds more open and unprejudiced, the desire for greater and better knowledge more eager—in fine, the gray matter of the cortex more on the alert than in some parts of Europe, where the old conservative notion of "Rest and be thankful" prevails to an undue extent, and where anything that is new is pretty sure to be looked upon with suspicion in leading circles, simply on account of its being new. Personally, gentlemen, I cannot help feeling it a special privilege to address you to-night under the presidency of my old friend and fellow-student, Jacobi, whom I first met, now thirty-six years ago, in Germany, at the University of Bonn-on-the-Rhine. I trust that on this occasion your eminent president, as well as yourselves, will extend to me that kind indulgence which I now make bold to claim at your hands as your visitor to-night.

The fact that the structure and functions of the brain may be peculiarly and specifically affected by the syphilitic virus seems to have escaped the acumen of the old masters in our profession. When syphilis first appeared in Europe, toward the end of the fifteenth century, and for a very long period afterward, the terrible external manifestations of this appalling disease engrossed the attention of medical practitioners to an unusual degree; nor were these symptoms of the malady of France unknown to the laity. Thus Shakespeare's *Timon* says to the two courtesans, *Phrynia* and *Timandra*:

> "Give them diseases; . . . bring down rose-cheek'd youth
> To the tub-fast, and the diet. . . . Consumption sow
> In hollow bones of man; strike their sharp shins,
> And mar men's spurring. Crack the lawyer's voice,
> That he may never more false title plead,
> Nor sound his quillets shrilly; hoar the flamen,
> That scolds against the quality of flesh,
> And not believes himself: down with the nose,
> Down with it flat; take the bridge quite away
> Of him that, his particular to foresee,
> Smells from the general weal: make curl'd-pate ruffians bald,
> And let the unscarr'd braggarts of the war
> Derive some pain from you: plague all;
> That your activity may defeat and quell
> The source of all erection."

[1] Read before the New York Academy of Medicine at its Stated Meeting, October 7, 1886.

While the clown in "Hamlet," in the grave-digging scene, says, in answer to the question how long a man will lie in the earth ere he rot, that he will last for eight or nine years,

> "If he be not rotten before he die,
> As we have many pocky corses nowadays
> That will scarce hold the laying-in."

While, therefore, impotence and disease of the cranial bones was thus early stated to be a result of syphilis, yet nothing was known for a long time about any specific disease of the viscera, and more especially of the brain and spinal cord, as arising from venereal infection. When it, however, eventually became obvious that some nervous complaints, such as paralysis, epilepsy, and insanity, frequently occurred in those who had previously suffered from the more ordinary forms of constitutional syphilis, this was explained by that convenient figment, a metastasis having taken place from the skin and mucous membranes to the brain, whereby the latter suffered without being actually diseased.

This fantastic view of the matter, however, did not commend itself to the clear intellect of such men as Hunter and Astley Cooper, who, on the contrary, stated plainly that the brain as well as the other internal organs were insusceptible to the venereal poison. This latter doctrine held the field for a very considerable time, as may be seen from a perusal of the works on diseases of the nervous system, which appeared in the first half of the present century. Thus I find that Abercrombie, in his work "On the Diseases of the Brain and Spinal Cord," which was for many years the great authority on nervous affections, and the first edition of which appeared in 1828, never once mentions the word syphilis at all. In speaking of the causes of brain disease, the Edinburgh professor alludes to continued fever and the exanthemata, injuries to the head, suppressed evacuation of certain secretions, such as the catamenia and the urine, scrofula, passions of the mind, stimulating liquors, and exposure to the intense heat of the sun. *Voilà tout.*

The same remark applies to the works of Sir Charles Bell, Marshall Hall, and Romberg. In the latter's clinique at Berlin, which I frequented assiduously in 1853 and 1854, and where I had the opportunity of seeing a large number of cases of all kinds of nervous diseases, I remember only a single instance where that great master allowed syphilis to have been the cause of the patient's illness; and that was a case of paralysis of the third nerve, which was stated to be due to syphilitic periostitis at the base of the skull. In 1854 and 1855 I likewise attended the syphilitic cliniques of Von Baerensprung, at Berlin, and of Sigmund, at Vienna, and saw numerous cases of primary and secondary affections, but not one of cerebral or spinal syphilis. Nor did the great leaders of the Vienna school of medicine, such as Skoda and Oppolzer, whose teachings I followed in the winter of 1855–56, draw attention to this subject in their otherwise admirable clinical lectures. Canstatt's text-book on "Special Pathology and Therapeutics," which was at that time in the hands of almost every student of medicine in Germany, and also constituted the principal guide of the practitioner, was likewise absolutely silent on this subject in the chapter on nervous diseases; while in that on syphilis the practitioner was actually cautioned not to believe in such a thing as syphilis of the brain—a most astounding statement when we consider that perhaps eighty per cent. of all cases of brain disease, which occur

in patients between twenty-five and forty years of age, are actually owing to that distemper. The same ideas prevailed in France, where Trousseau and other masters, whose wards I frequented in the summer of 1855, never mentioned cerebral syphilis at all, and invariably attributed any nervous symptoms in syphilitic patients to cranial periostitis.

The only man who about that time knew that the brain was liable to specific disease was Professor Waller, of Prague, whose lectures I attended in the summer of 1856. He told his hearers then that he had seen red and white softening, and a deposit of solid effusions in the white as well as the gray matter of the brain. According to him the symptoms during life were indistinct, and we could only diagnose cerebral syphilis where the patient suffered at the same time from external manifestations of the distemper. He had known patients in the later stages of the disease to suffer from epilepsy, paralysis, and mental hebetude; but the brain might also suffer at an early period, synchronously with the ulcerated throat, and he had seen cases in which a most violent form of headache was the principal symptom, and where, in spite of active treatment, the patients had died comatose. I believe that these observations of Waller's have never been published, and what I have just mentioned is culled from notes which I took at the time his lectures were delivered.

With this solitary exception, then, all that was taught until a comparatively recent time on this subject was that syphilis might produce an affection of the dura mater analogous to that of any external periosteum; that the membrane might become inflamed, and an intracranial node be formed, which would irritate the surface of the brain, and might give rise to neuralgic, convulsive, and paralytic symptoms. Cases of this kind have been described among others by Sir Philip Crampton, Graves, and MacDowell, of Dublin; by Reade, of Belfast, and by Todd, of London.

A new era in the history of our subject began with the great impetus which was about that time given to the study of pathological anatomy. Among the many successful workers in this most attractive field of research two men stand forth conspicuously, as far as our subject is concerned, viz., Virchow, whose investigations cleared up the nature of syphiloma of the brain and its membranes (1869), and Heubner, who gave us a clear insight into the syphilitic alterations which are apt to occur in the cerebral arteries (1874). These researches may, each in its own way, be considered as landmarks in the history of cerebral syphilis. The foundations of the doctrine were now securely laid, so as to be beyond cavil; and it became clear that, although subsequent work might amplify our knowledge in this respect, it could no longer reverse what was once firmly established.

The salient feature of this work is that the peculiar and specific alteration which occurs in the brain as a consequence of constitutional syphilis is not inflammation, but that it bears throughout the character of a neoplasma. A foreign tissue is apt to be deposited in the dura mater, the subarachnoid space, or the cerebral substance, and forms the several kinds of tumor known as syphiloma or gumma. Apart from this, however, there occurs a special disease of the cerebral arteries, which likewise appears in the form of a neoplasma, inasmuch as a deposit takes place between the endothelium and the elastic fibres of the vessel, whereby its diameter is at first reduced, and the lumen eventually completely blocked up by thrombosis, causing ischæmia, starvation, and softening of the area of cerebral tissue which is supplied by the suffering vessel. Syphiloma and arterial thrombosis cover, indeed, the immense majority of causes of cerebral syphilis which are met with in practice. There remains a residuum of cases in literature in which no structural change could be discovered after death, and in which the symptoms were generally attributed to congestion; it is, however, a suggestive fact, that during the last ten or fifteen years, during which the finer methods of microscopic research have been so much improved, the record of such cases has almost ceased; and it therefore appears probable that one or the other of the two fundamental lesions which I have just mentioned, and their consequences, may, in the future, be generally found to exist in fatal cases of this description, while in many of those which do not prove fatal I believe anæmia rather to be the cause of the symptoms than congestion, to which it is usually attributed.

While, therefore, Virchow's and Heubner's work must be looked upon as epoch-making in the pathology of cerebral syphilis, correspondingly good clinical work has been done elsewhere. I shall probably not be contradicted when I say that Fournier's book, "La Syphilis du Cerveau," which appeared in Paris in 1879, has very greatly extended our acquaintance with the more common, as well as the more unusual, forms which brain-syphilis is apt to assume at the bedside. Fournier has distinguished six different forms of it, viz., the cephalalgic, the congestive, the convulsive or epileptiform, the aphasic, the mental, and the paralytic; and his description of the symptoms which occur in these several forms is more minute and exhaustive than any other which has been given before, and will on that account always remain a monument of able and painstaking industry. A disappointing feature of Fournier's work is that he does not generally point out clearly the connection which exists between clinical signs and pathological lesions, and appears to be only slightly acquainted with the modern doctrine of cerebral localization, which just in this department of clinical medicine finds its most interesting and striking practical applications.

I now proceed to the more particular object of my paper, which is to draw your attention to some manifestations of cerebral syphilis with the peculiarities of which we are as yet imperfectly acquainted. Time, that most unsparing of tyrants, will only allow me on this occasion to revert to two among the numerous subjects which crowd on one's attention in thinking of brain-syphilis, and those which I have selected are: syphilitic coma and syphilitic hemiplegia.

That coma, coming on more or less suddenly in an apparently healthy man, or in one who shows at the time unmistakable symptoms of venereal disease, may be a manifestation of this latter distemper, is not generally known in the profession. We are all familiar with uræmic, alcoholic, and diabetic coma; with the coma of cerebral hemorrhage and that of opium-poisoning; with that which occurs after the epileptic fit, with or after severe hysterical, and hystero-epileptic convulsions; after prolonged exposure to extremes of temperature, whether heat or cold; after erysipelas of the face and head from compression of the brain by a depressed fracture of the skull, by extravasated blood, meningitis, and the presence of pus and other products of inflammation. Nor must we forget that several chronic affections of the nervous system, more especially tabes spinalis, and general paralysis of the insane, are apt, toward their termination, to be attended by attacks of coma. Most of these conditions are described in the text-books, while syphilitic coma is not even mentioned. Fournier is almost the only author who has pointedly, although shortly, alluded to this condition, and related an example of it which occurred in his practice. A knowledge of syphilitic coma is, however, of great practical importance, inasmuch as it requires an entirely different treatment from that of other forms of coma, and an incorrect diagnosis is in such a case likely to seal the fate of the patient.

I have seen, altogether, eight unmistakable cases of syphilitic coma. They all occurred in males between twenty-five and forty-two years of age. In every one of them was there a definite history of primary and secondary syphilis; in four there was at the time a specific rash on the scalp and other portions of the skin; and in one an ulcer in the tongue. In one case the coma ap-

peared eight months after infection; in six between three and five years, and in one case seventeen years afterward. In two cases no other cerebral symptoms had occurred before the coma, while six other patients had at various times suffered from giddiness, epileptiform convulsions, and transient loss of power in the limbs.

Among the exciting causes of the attack I have noticed overwork, anxiety, trouble, and sexual and alcoholic excesses. In two cases no exciting cause whatever could be ascertained. Six of the patients were professional men, and two were men without any regular occupation.

The symptoms of syphilitic coma I venture to classify as, first, premonitory signs; second, symptoms of the initial stage; and third, symptoms of the final stage of coma.

1. I have noted the following premonitory symptoms of the attack of coma: headache, a feeling of confusion and drowsiness, indistinct utterance, a perception of black specks floating before the eyes, with sudden loss of sight for a short time, numbness in the limbs, and some loss of muscular power. In six cases such symptoms occurred either a few hours, or a day or two, before the attack, while in two other cases they appeared to have been entirely absent.

2. The initial stage of syphilitic coma appears to set in habitually during sleep, the patient being discovered by his friends or servants in the morning in a state of apparent insensibility from which he cannot be roused. He is lying quietly on his back, apparently quite unconscious, and, as it were, in a profound sleep. He is evidently not suffering any pain; he does not moan, throw himself about, or put his hands to his head. The face is absolutely devoid of expression; there is a complete blank, and no distortion of the features. The complexion is generally pale. Sometimes he can be roused by shouting to him; he may speak a word or two, and appears to recognize the voice of a friend better than that of a stranger. When asked whether he can see you, he may answer that he is blind. When requested to put out his tongue, he is seen to make an effort to do so. Sometimes the only response is a movement of the lips, at other times the tip of the tongue is protruded, which is then seen to be dry, and covered with a whitish fur through which some few red papillæ are seen to project; but it is not deviated to the side. When food is put into his mouth, the patient makes an effort at deglutition, and generally succeeds in swallowing small quantities of fluid. The eyes are closed. On opening the lids the eyeballs are seen to be deeply retracted into the orbit, one sometimes more so than the other; and they are seen to diverge somewhat in their direction, which imparts to them a particularly dazed and stupid expression. The deeper the coma, the greater is, *cæteris paribus*, the degree of divergence. The pupils are small and insensible to light. On account of the position of the eyes, an ophthalmoscopic examination is generally not practicable, but reveals nothing unusual when practised. The reflex excitability of the conjunctivæ is either very much blunted or entirely gone. The breath is sometimes offensive.

The muscles of the limbs and the body are in a state of perfect relaxation. The body will retain any position which is given it. On lifting the arms or legs, no resistance is encountered; and on dropping them, they flop back heavily by their own weight, like inanimate matter, as in a dead body from which rigor has disappeared. There is no difference at all between the two sides of the body; no appearance of hemiplegia, or rigidity, or tremor, but a dead level of paralysis, with complete loss of muscular tone, everywhere.

Sensibility and reflex excitability are greatly diminished, or quite gone. I have already mentioned that the conjunctival reflex is lessened or absent, and that there is no light reflex in the pupils. Tickling the soles or the knees produces no withdrawal of the legs; but on smartly pricking the skin with a pin, there is generally a slight response. Where the coma is not very deep, the patient may express, by a grunt, his dislike of the proceeding. The deep reflexes or tendon phenomena are either absent, or can only be elicited with considerable difficulty, and then appear slight and sluggish.

There is, either from the first or very soon, incontinence of the excretions, especially of the urine, which is apparently secreted much in the usual manner, and dribbles away as it reaches the bladder, through paralysis of the sphincter. The fæces are also apt to come away involuntarily, but occasionally there is obstinate constipation, which only yields to powerful purgatives or enemata, and the evacuation then takes place into bed, the patient having no sensation of its coming away and being unable to give a warning.

The pulse is habitually slow, beating at the rate of forty, fifty, or sixty in the minute. In one case I have known it to go down to thirty-six, while in another it was eighty-six. The quality of the pulse varies in the different cases; it may be hard and wiry, showing the sphygmographic signs of increased tension, or tolerably full, or small and feeble, when the sphygmograph indicates low tension.

Respiration is slow and shallow, the excursion of the chest-walls and diaphragm being insignificant. The rate of inspirations varies like that of pulsation, but is generally less than in health. The average rate appears to be from eight to ten.

The temperature is below the average, and ranges habitually between 96° and 97°. In one case I have known it to go down to 95°.

In two cases there was an eruption of herpes in the face, large groups of vesicles being formed on inflamed patches on both cheeks. On the first day the liquid was clear; on the second it became opaque, and the epidermis then gradually peeled off in small patches. Otherwise the skin is generally dry, there being little or no perceptible perspiration.

What is the condition of the brain in the cases which I have just described? It is evidently a complex one, for while we have, on the one hand, symptoms of paralysis, there are, on the other hand, signs of irritation of the nervous centres. The loss of consciousness, and of voluntary motion and sensation, shows that the function of the cineritious substance of the hemispheres, and notably that of the frontal and temporal lobes and of the central convolutions, is in abeyance; while the state of the pulse, the respiration, and temperature shows that the cardiac, vaso-motor, respiratory, and thermic centres in the medulla oblongata and the pons Varolii are in a state of irritation. Such a coincidence of paralysis and irritation is by no means so singular as it might appear at first sight, if we consider the various degrees of excitability which exist normally in different portions of such a highly complex organ as the brain is known to be. Of all parts of the encephalon, the gray cortex is the most highly vitalized, and the one that requires the most active circulation of the blood, the most incessant supply of oxygen, in order to be able to properly discharge its function. Any interference with the supply of arterial blood to the cortex, however temporary, acts like a blow with a hammer on a magnet, that is to say, it destroys its function for the time being by suddenly disturbing its molecular condition. In poisoning by carbonic acid, there is at first a short stage of irritation of the cortex, shown by headache, giddiness, and noises in the head; but this is rapidly succeeded by depression, consciousness being lost and a state of coma induced. At this time, however, there is still irritation of the medulla, shown by a slow pulse, increased blood-pressure, and convulsions, and this stage is only eventually succeeded by paralysis, when respiration becomes feeble, the blood-pressure falls, and death results from apnœa. That in patients suffering from syphilitic coma there may be a short stage of cortical irritation, is rendered probable by the premonitory symptoms which I have mentioned, such as headache, giddiness, and a feeling of confusion.

A coincidence of depression and irritation may be observed in much less complex structures than the brain. Thus we have, in the early stage of an acute attack of sciatica—whether of rheumatic or traumatic origin—on the one hand, symptoms of depression, viz., numbness in the foot and loss of power in the muscles supplied by the sciatic nerve; and, on the other hand, concurrently with them, symptoms of irritation, viz., acute pain in the whole or part of the limb, and convulsive twitches in the muscles which are under the influence of the suffering nerve.

That there is irritation of the lower centres in the first stage of syphilitic coma seems to me to be proved by the slow pulse, the increase of blood-pressure which is present in the majority of cases, the retarded respiration, the lowered temperature, and finally by the state of the pupil and of the ocular muscles. There is a centre for these latter parts in the posterior portion of the floor of the third ventricle and the aqueduct of Sylvius, and, therefore, an intimate connection with the upper portion of the pons Varolii, which has by Hensen and Voelcker been shown to have definite relations to the iris and the other muscles of the eye. Irritation of this centre would explain the contraction of the pupil and the different forms of ocular spasm which are found to be present in syphilitic coma; just as paralysis of the same centre is known to lead to the different forms of ophthalmoplegia.

The initial stage of syphilitic coma lasts in general from two to five days, and is followed either by recovery, or merges into the final stage which leads to death. In the former case the patient gradually begins to show signs of returning consciousness; he opens his eyes from time to time, moves them about in different directions, and recognizes the people about him. He regains his command over the sphincters, and calls the nurse when desiring to pass his excretions. The power of swallowing is improved; he begins to take food with some amount of relish, recovers his muscular power, sits up in bed, has natural, refreshing sleep followed by wakefulness, and presently wants to get up, and begins to go about again. In ten days or a fortnight he may apparently be well, and able to resume, at least to some extent, his previous occupations.

In other cases recovery is more slow and imperfect. The speech remains indistinct and halting, the memory is weak. An hour after having seen a person or read a newspaper, the patient remembers nothing about it. The power of moving the eyes freely remains impaired. He does not seem to take much interest in his affairs, or show much affection for his family. At times, however, he appears to realize his position acutely, and bursts out crying, while at other times he is absent-minded and drowsy.

> "All is but toys; renown and grace is dead;
> The wine of life is drawn, and the mere lees
> Is left this vault to brag of."

Eventually, however, even in these less favorable cases the brain power may be more or less restored, showing but little deterioration compared with what it was previous to the attack.

This is the bright side of the picture; and, as recovery generally takes place in consequence of an energetic specific treatment, the doctor may well take credit to himself for having saved his patient's life or reason. But there is also a darker side, since in some cases all the resources of our art prove unavailing. The patient then, after having been for a few days in the condition previously described, gradually sinks into what I propose to call the *final stage* of syphilitic coma.

3. This stage is characterized by an intensification of the symptoms of unconsciousness, loss of voluntary power, sensation, and reflex excitability; while the signs which I have referred to irritation of the pons and bulb now pass into such as denote a paralytic state of these organs. The face is livid and cyanosed; the conjunctivæ are injected, covered with shreds of mucus, and insensible to touch or irritation. The mouth is wide open, from paralysis of the masseter muscles, causing the lower jaw to drop. The breath is fetid; the power of swallowing lost. There is either excessive secretion of buccal mucus, or great dryness of the lips, tongue, and cavity of the mouth, which are often covered with sordes. The surface of the body is bathed in clammy sweat. The pulse, where it has been hard and wiry, rapidly loses that character, and becomes small, feeble, and very quick, going up to 140, 180, and more. It eventually cannot be counted, and shows sphygmographically the characters of collapse, there being only a very slight elevation followed by a proportionate depression, but without waves, aortic notch, or dicrotism. Respiration, from having been retarded, is now accelerated, with thirty to forty and more inspirations per minute. It may become stertorous, and pass into Cheyne-Stokes type; or neurolytic catarrh of the air-passages sets in, with excessive secretion of bronchial, tracheal, and laryngeal mucus, while on auscultation râles are heard all over the chest. This may pass into hypostatic pneumonia, when the mucus becomes tinged with blood. At the same time the temperature is found to rise from 95° and 96° to 104°, 106° and 108°. The pupils become enlarged, and show their maximal dilatation at the moment of death. Eventually the face assumes the Hippocratic expression, and is occasionally so altered within a few minutes that the patient's friends have a difficulty in recognizing him. This stage generally lasts from twenty-four to thirty-six hours, and terminates in dissolution; the patient passes away to

> "The undiscovered country from whose bourne
> No traveller returns."

Of the eight cases of syphilitic coma which have fallen under my observation, six ended in recovery, and two in death, in the first attack. In three of those who recovered from the first attack, however, relapses took place after some time, and one of these latter patients eventually died after having survived five such attacks in three years.

I regret to say that I was not allowed to make a necropsy in either of the two fatal cases, and I am, therefore, unable to describe to you the exact lesion which caused the illness and the final result. Reasoning from analogy, however, it seems to me highly probable that we have in these cases to do with an affection of an important cerebral artery, which becomes gradually occluded by specific deposit in the way so clearly described by Heubner; and that the vessel principally implicated is the basilar artery.

The basilar artery gives branches to the cerebellum, pons, and medulla oblongata, and terminates in the A. cerebri profunda, thus supplying the vitally most essential parts of the brain; and it is obvious that an interruption of the blood-supply by this vessel must lead to a profound alteration of the parts nourished by it. Sudden occlusion of this artery by acute inflammation or deposit leads rapidly to a fatal result, the principal symptom being profound coma from the beginning of the illness. Hayem has recorded the case of a woman, aged thirty-three, who was brought into the hospital in a comatose state, in which she had been found at home shortly after having been seen engaged in her usual occupations. This patient died in twenty-one hours. The autopsy showed acute inflammation of the basilar artery; all the coats of the vessel, but more especially the internal one, being much thickened, and in one place so much so that the lumen of the vessel was entirely occluded. There was hyperæmia, swelling, effusion, and abundant production of young cells and nuclei. Where the vessel was not occluded by inflammation, it was filled up with a thrombus, part of which was soft and pinkish, while another part was hard and resisting, the clot being apparently due to rupture of the internal coat of the artery through the effusion, after which the blood had become coagulated and mixed with the broken-up structures. The brain-matter

was firm, with the exception of the pons, which had a pasty consistency, more especially in the lower portion, which is in direct connection with the basilar artery; but there was no actual softening. Indeed, there had been no time for the production of such a change. Similar cases have been seen by Vulpian, Martineau, Gouguenheim, and Bastian. The case of the last-named observer was that of a watchman, aged forty-three, who had been apparently in his usual health, and was suddenly taken with coma, which proved fatal in less than six hours. After death there was found an aneurismal dilatation of the posterior half of the basilar artery, which was perfectly occluded by a soft, colorless clot, uniformly adherent to the aneurismal walls. The middle cerebellar arteries were in connection with the aneurismal swelling, and likewise occluded. Otherwise, nothing of importance was discovered in any one of these cases, and the symptoms which were present are indeed well explained by sudden anæmia induced in the vasomotor, cardiac, and respiratory centres, in the pons and bulb, through the basilar artery becoming impervious. The only difference between the cases of acute inflammation and of sudden coagulation on the one hand, and those which I have described as such of syphilitic coma on the other hand, appears to be the extreme rapidity of the course of events in the former class, while this is much slower in the latter. When a specific deposit takes place in the basilar artery, therefore, it seems that much more time is required for producing occlusion of the vessel than is the case in ordinary inflammation or thrombosis. For the same reason I should expect that, in addition to the occlusion of the vessel in a fatal case, there would also be found some degree of softening in the pons and bulb. While, therefore, there appears good reason to believe that syphilitic coma is owing to specific disease of the basilar artery, I admit that this view still stands in want of corroboration by actual inspection.

The diagnosis of syphilitic from other forms of coma is sometimes easy, and sometimes extremely difficult. The history and attendant circumstances of the case must guide us in the recognition of such conditions as coma from exposure to extremes of temperature, from injury to the head and meningitis, from erysipelas of the face, etc. The coma which accompanies ingravescent apoplexy from cerebral hemorrhage occurs habitually in men past fifty years of age, while syphilitic coma occurs either in young men or in those in the prime of life. Moreover, there are in the former, habitually, the well-known symptoms of hemiplegia, which are absent in syphilitic coma. The cases most likely to be confounded with the latter are those where hemorrhage takes place into the pons, causing great contraction of the pupils, retraction of the eyeballs into the orbit, and paralysis of all four of the extremities. In such cases the question likewise arises whether we may not have to do with opium-poisoning. In endeavoring to decide these questions we must remember that in syphilitic coma the pupil is not extremely contracted, while in opium-poisoning and hemorrhage into the pons it is so to the utmost possible limit. Where laudanum has been taken, this may be smelt in the breath; and if the unconscious patient be seen to scratch himself vigorously, we would conclude for opium, itching being a frequent symptom of poisoning with it. Finally, in opium-poisoning there is retention of the urine, with a full and often greatly distended bladder, which sometimes reaches up into the epigastrium, while in syphilitic coma the bladder is empty, and the urine found to dribble away as it is secreted.

The coma which follows an epileptic fit, and severe hysterical and hystero-epileptic convulsions, is habitually of a much shorter duration than syphilitic coma. Moreover, the epileptic fit, even where it has not been witnessed, leaves evidence in a bitten tongue, foam at the mouth, and petechiæ of the face. The history of the case may also be of use. A young woman was admitted a few months ago into the hospital under my care in a comatose condition, and the mother stated that the girl had had fits and had for some time past been unable to feel anything in her left side. Here we had, therefore, to do with hemianæsthesia in a young woman and fits, which led me as such to suspect hystero-epilepsy; and this was confirmed by the further progress of the case. In this instance the coma lasted for thirty-six hours.

Alcoholic coma occurs frequently in the London Dock, where the men who are employed there are apt to develop a craving for sucking raw spirit from a barrel through a straw, until they fall down dead drunk; and if discovered near the barrel in this state, the diagnosis is indeed ready-made. But under other circumstances difficulties may arise. The smell of alcohol in the breath is of very little diagnostic use, as a man beginning to suffer from the first effects of cerebral hemorrhage is apt to take brandy for reviving himself, or is given it by sympathetic by-standers. More trustworthy information may be obtained from the urine. When small doses of alcohol are taken, this is eliminated partly by the breath, and partly undergoes combustion in the blood and tissues, and can, therefore, not be discovered in the urine; but large doses, such as are sufficient to produce coma, are eliminated unchanged by the urine; so that, if the latter be found to have an alcoholic smell, this is enough to establish the diagnosis. The temperature is generally lowered in alcoholic coma, but rarely more than one or two degrees, so that, for instance, a temperature of 95° would speak against it. Another important sign is that the pupil is enlarged in alcoholic coma, while in syphilitic coma it is small.

The diagnosis of uræmic coma will be easy where the history of the case is known; but where it is not, difficulties may be experienced. This kind of coma may occur quite suddenly, without any premonitory signs, for the patient may fall down unconscious while writing at his desk or driving in a carriage. In general, however, it is preceded by headache and vomiting, and occasionally by defects of sight and hearing; after this, epileptiform convulsions set in and leave the patient comatose. Breathing is stertorous, and the pupils are dilated. The patient may recover for a time, but is again seized by a fit, and becomes once more comatose. It is therefore seen that in uræmia we have to do with fits and remissions, and that there is not that dead level of unconsciousness as in syphilitic coma. Anasarca is frequently present; there is generally no incontinence, but retention of the urine, which is scanty, and if a specimen be obtained, it is found to contain albumen and tube-casts. Finally, the presence of urea can be shown in the blood by raising a blister, evaporating the serum which is effused, treating the residue with alcohol, and then adding a few drops of nitric acid, when crystals of nitrate of urea will be formed.

Finally, how are we to distinguish syphilitic from *diabetic coma*, or, as it is sometimes called, Kussmaul's coma, or acetonæmia? About one-half of the patients who succumb to diabetes die comatose; and as the coma sometimes sets in quite suddenly, and apparently without any warning, Prout, and Frerichs after him, were quite justified in saying that the diabetic lives habitually on the brink of a precipice. There are three different kinds of diabetic coma. The most common is that with which Kussmaul's name is connected, and which occurs chiefly in young persons, and where the course of the disease is rapid. This is sometimes ushered in by epigastric pain, vomiting, diarrhœa, or obstinate constipation. The patient is then seized by a peculiar form of dyspnœa; he lies gasping for breath, respiration being very much accelerated, while the respiratory movements are free and the air-passages pervious. The breath has a peculiar odor, like cider, apples, or chloroform, which is owing to the presence of acetone in the expired air. The urine is abundant and contains sugar;

in almost all cases it likewise shows a peculiar reaction with perchloride of iron, which imparts to it a deep reddish or Burgundy color, which disappears on heating or acidulation. This reaction is generally owing to the presence of aceto-acetic acid in the urine. This acid, however, is a very unstable compound, and easily splits up into acetone and carbonic acid, so that acetone is also habitually found in the urine. It appears probable that besides these two substances there are other poisons present in it, more particularly diacetic ether, trimethylamine, and bata-oxy-butyric acid, which are formed in the blood in consequence of the abnormal tissue-changes, and poison the nervous centres unless they can be quickly eliminated. In consequence of this the patient becomes drowsy, and there may be at the same time a restless delirium. There are sometimes remissions, but eventually the coma deepens. The pulse is quick, the temperature normal, subnormal, or very low indeed, down to 90° in the rectum. The pupils are sluggish, the surface of the body is cold, and death is sometimes preceded by convulsions. The peculiar form of dyspnœa and the presence of acetone and its allies in the breath and urine are sufficient to guide us in our diagnosis of these cases.

There are, however, two other forms of diabetic coma the knowledge of which we owe chiefly to Frerichs and Dreschfeld. The first of these is what may be properly called diabetic collapse. It occurs more in elderly persons, especially when they are stout, and subject to gout and nephritis, and after they have been diabetic for some considerable time. There are the usual symptoms of collapse, which soon passes into coma and death; and the condition is probably owing to fatty degeneration of the heart and sudden failure of its action, especially after over-exertion or excess.

The last form of diabetic coma, and which is only rarely met with, is that where there is a first stage of excitement resembling that of alcoholic intoxication, and which is after a time succeeded by coma and death. In these cases acetone has also been discovered in the urine, and in one of them large quantities of alcohol were found in it, although it was ascertained with certainty that the patient had not taken alcohol in any form or shape. These latter two kinds of diabetic coma cannot therefore possibly, on account of the great dissimilarity of symptoms, be confounded with syphilitic coma.

The prognosis of syphilitic coma is always grave. Although it is not by any means as hopeless as that of uræmic and diabetic coma, which latter almost invariably prove fatal, yet there is proof that that terribly subtle and rancorous poison of syphilis has insinuated itself into the cerebral arteries; and, even if neutralized by treatment for a considerable time, will probably sooner or later return to the attack, and eventually overcome all resistance. The prognosis of the individual attack is, however, on the whole not very unfavorable, more especially if specific treatment is resorted to in the beginning. My two cases, in which the first attack proved fatal, had been treated simply with stimulants until symptoms of paralysis of the pons and bulb had supervened, so that they were practically hopeless at the time the specific treatment was commenced. What is likely to occur after the patient has recovered from the attack depends to a great extent upon the degree of perseverance with which he may allow a specific treatment to be carried out. Some patients are averse to swallowing medicine unless they are at death's door, and give up treatment as soon as they feel tolerably comfortable. For these the prognosis is of the worst description; for they are certain either to succumb to a similar attack sooner or later, or to end their days in the madhouse as general paralytics. Where, on the contrary, a patient will submit to two years' consecutive treatment for the distemper under which he is laboring, he appears to have a fair chance of escaping further trouble from this source.

The treatment of syphilitic coma should be partly symptomatic and partly specific. Systematic feeding with easily digestible substances, more especially milk, chicken-broth, beef-tea, and small doses of alcohol, is of the greatest importance. The food may be peptonized if considered advisable. If the patient should appear in imminent danger of death, hypodermatic injections of ether sometimes turn the balance in his favor. I once injected forty minims at a time, with the result that the patient rallied almost immediately. The average dose is twenty minims, three or four times a day. Ammonia has appeared to me of little use in this condition. Blistering the back of the neck or the forehead, however, seems sometimes to be beneficial. Ice or other cold applications to the head are unnecessary where the temperature is normal, and hurtful where it is diminished; while in the later stages of the complaint, where the temperature runs up very high, I have found them quite useless. The cold douche, which is often so beneficial in the coma of meningitis, has appeared to me to do more harm than good in some of the cases now under consideration, while in others it scarcely seemed to warrant the trouble which was required for administering it.

The principal part of the treatment is the specific one by mercury, which should for obvious reasons be administered either by inunction or by hypodermatic injection. For inunction we may use the old-fashioned blue ointment, which is probably after all the most effective of all external applications, as mercury appears in the urine after a single inunction of one drachm, which contains twenty grains of metallic mercury; or the oleate may be used, containing ten, fifteen, or twenty grains of the yellow oxide for an application. Three inunctions of this are, however, required for showing mercury in the urine. The yellow oxide may also be rubbed up with lanoline, and seems to be rapidly absorbed in this combination. For hypodermatic injections I consider the perchloride to be the most effective preparation, and this should be injected deeply into the substance of the glutæi muscles, in order to avoid irritation and the formation of abscesses, which is so apt to occur when this medicine is injected into the subcutaneous areolar tissue. We may, however, also use the albuminate, the peptonate, the cyanate, and the formamidate of mercury, in doses of one-sixth to one-third of a grain, once a day.

Time warns me that I shall soon have to bring my remarks to a close, and I will therefore at once proceed to the second portion of my discourse, which will treat of some of the clinical peculiarities of syphilitic hemiplegia as compared with ordinary hemiplegia.

The symptoms of the ordinary attack of hemiplegia, owing to hemorrhage into the central ganglia or embolism of the Sylvian artery, are rarely reproduced in the attack which is owing to syphilitic infection. While in the former we meet with the well-known symptoms of apoplexy, to which more or less complete motor paralysis of one side of the body is added, we find in the latter a number of different types which all show great variations from one another, as well as from the non-specific attack of hemiplegia! There are, however, some features which all these several types have in common, viz.:

1. The immense majority of the patients are males, according to my experience ninety-five per cent., while both sexes suffer about equally from ordinary hemiplegia.

2. The patients are young, or comparatively young, subjects, viz., between eighteen and forty years of age—

> For in the morn and liquid dew of youth
> Contagious blastments are most imminent.

3. They show a peculiar behavior of the deep reflexes or tendon phenomena, which has not been previously described, and to which I shall have presently to refer in a more pointed manner.

One of the several types of syphilitic hemiplegia is shown by the case of a clerk, aged twenty-eight, who was under my care at the hospital in November, 1884. This young man tells me that he comes from a healthy stock,

but has for years past committed excesses in drinking, smoking, and sexual indulgence; that he has had gonorrhœa half a dozen times, and a hard chancre followed by specific eruptions four years ago. After that he continues apparently quite well for three years; but unquestionably that terrible bacillus is breeding in his lymphatic system all the time, for he finds one day that his left eyelid droops, and that he has a difficulty in seeing with the left eye. At that time he happens to be in Australia, and six months afterward takes his passage home. He has been on board ship for a fortnight, and never thinks that there is anything the matter with him, when, one day, while sitting quietly on deck, he experiences a feeling of faintness and giddiness; there is no loss of consciousness or language, no headache or sickness, no incontinence of the excreta, but he has a strange feeling of loss of power gradually stealing over his right side, and in half an hour finds that he cannot use his hand, and walks lame. The paralysis is incomplete, for he has always been able to move the arm and hand in different directions, although slowly and sluggishly, and has not been obliged to take to his bed for a single day.

Such an evolution of symptoms points very plainly to brain disease of syphilitic origin; indeed, the diagnosis might in this case almost have been made without inquiry about a previous specific sore or secondary symptoms. This man had had a stroke of paralysis of the right side at twenty-eight years of age, without any other systematic affection which could account for it; and we may take it for granted that if hemiplegia occur in a patient between twenty and forty years of age, who has no heart disease, diabetes, tabes, kidney disease, alcoholism, etc., and in whom there has been no preceding acute illness, such as pneumonia, typhoid fever, etc., there is the strongest presumption that the affection is venereal. Another characteristic sign was that there had been no apoplexy at the time the stroke took place; for while the ordinary attack of hemiplegia from softening or hemorrhage is habitually accompanied by loss of consciousness and incontinence of the excreta, the syphilitic patient, when struck by hemiplegia, often assists, fully conscious, at the invasion of the paralysis. Then, again, the palsy had been incomplete from the beginning, and had remained so throughout its further progress. This incomplete character of the paralysis is another peculiar feature of syphilitic hemiplegia; for, while in the idiopathic form there is complete loss of motor power, at least for the first few days or weeks of the illness, this is somewhat exceptional in the syphilitic variety, which is more frequently paresis than paralysis.

I have stated that the first nerve-symptom which occurred in this patient was drooping of the left eyelid, and difficulty of seeing with the left eye. On examining the eye I found that there was external as well as internal ophthalmoplegia, owing to paralysis of the third, fourth, and sixth nerves. This paralysis was complete in the superior and inferior recti, and the inferior oblique muscles; and incomplete in the levator palpebræ superioris, the internal and external recti, and the superior oblique. There was also paralysis of accommodation, and of the sphincter and dilator of the iris. The pupil was large, of ovoid shape, insensitive to light, and only slightly influenced by atropine. Dr. Laidlaw Purves reported the ophthalmoscopic appearances of the fundus of the eye to be normal, the tension likewise normal, no bulging or tenderness to pressure, vision $\frac{15}{100}$, color vision fair. The right eye and eyelid were quite normal, and there was no sign of disease in the other cranial nerves. The complication of hemiplegia of one side with ophthalmoplegia on the other side is, again, most significant for syphilis. In the ordinary form of hemiplegia the only cranial nerves which are affected are the portio dura and the hypoglossus of the same side. In syphilitic hemiplegia, on the contrary, we frequently meet with palsies of the nerves of the eyes, more especially the third, but also the fourth and sixth. Such palsies, indeed, were long ago called by Ricord the signature of syphilis on the eye of the patient. Ptosis alone is very common; and still more common is ptosis combined with paralysis of the rectus superior or the rectus internus. Besides these there are all possible varieties and combinations of ocular palsies, occurring in about three out of every four patients suffering from cerebral syphilis.

A second type of syphilitic hemiplegia is that in which the paralysis is preceded by headache of a peculiar character, and of this the following is a good instance:

An architect, aged thirty-seven, single, consults me in December, 1881. He has not inherited any neurotic tendency, and has been in excellent health—saving an attack of small-pox when quite young—until 1873, when, after impure connection, he is troubled with a chancre, which is soon followed by roseola, sore-throat, and ulceration of the tongue. These symptoms continue for about twelve months, but eventually yield to mercury and Zittmann's decoction. The patient now remains apparently in good health for six years, when he is seized with headache of extreme violence, which occupies the very centre of the head, and comes on periodically three or four times in the course of the twenty-four hours. It lasts for about an hour each time, and is so severe as to drive him nearly frantic. It is not like neuralgia, rheumatism, or megrim, but more deep-seated and inside the head, as if blows from a heavy hammer went right through the substance of the brain. The patient is, singularly enough, all the time treated with quinine, which does no good, and the pain continues with the same maddening violence for six months, when the patient one day falls down in a fit, speechless, but not unconscious, paralyzed on the right side, but retains full control over the excreta. From that day he never has had any more headache. In ten days he recovers his language, but the paralysis of the side remains. After a time he is seized with such severe pain in the spine that as many as five hypodermatic injections of morphia per diem are required to ease him; and shortly afterward he loses the power over the left leg, the bladder, and the bowels. The bladder is at the same time so irritable that the patient has to introduce the catheter, which he does with the left hand, every hour, by day and night. His speech and his intellectual faculties are normal, there is no ocular paralysis, but paralysis and rigidity of the right arm and both legs, paralysis of the bladder, and great sluggishness of the bowels. No similar evolution of symptoms ever takes place in cases of idiopathic disease.

A third type of syphilitic hemiplegia is that where both sides of the body are affected in succession, the attacks following one another either within a few days, or weeks, or months. A case of this kind is that of an officer, aged forty, single, who came under my care in April, 1880. He had enlisted in the British army when seventeen years of age, and served chiefly in India. His health had on the whole been good, but in 1875 he had gonorrhœa and syphilis, and was treated with mercurial inunction. Rather more than three years after this he is told off to take part in the campaign in Afghanistan, and suffers a good deal from exposure to the extreme cold prevalent at that time. Presently he begins to suffer from headache, giddiness, and general malaise, which continues for about a week. One night, being too restless to sleep and feeling very unwell, he gets out of his tent, and begins to walk about in camp, but finds that he has great difficulty in moving. He therefore goes back to his tent, and after awhile falls asleep. On waking in the morning he is surprised to find himself paralyzed—the left side—and that the excreta have passed under him. He cannot put out his tongue, has great difficulty in speaking and swallowing, and his pupils are very large. Five days afterward he feels that he is losing power in the right side of the body, and this becomes worse day by day, so that at the end of ten days he is completely paralyzed and has lost his language. During the whole of this time he has never once lost his consciousness, but

has constantly suffered from faintness, giddiness, and headache. He is now put on iodide of potassium, and within a month from the commencement of the illness begins to improve. The speech returns, although there is still difficulty of articulation; he recovers a degree of motor power, more especially in the right side; is invalided and sent home, and bears the journey pretty well. I have seen him quite lately; he remains in much the same condition, is totally disabled as far as locomotion is concerned, but his intellectual faculties have remained quite clear.

In other patients months may intervene between the successive attacks of hemiplegia. Such was the case of a woman, aged thirty-four, whom I saw at the hospital in December, 1883. She had been quite well up to the time of her marriage, five years ago. Her husband was a soldier, had served in the British army in almost every quarter of the globe, and notoriously led a very wild life. A month or two after her marriage the wife was seized with ulcerated throat, and an obstinate skin eruption. Three years afterward she suddenly found that her left eyelid drooped; and there is now ptosis and paralysis of the rectus internus. Six months after that she had a stroke of right hemiplegia with aphasia, and four months after this, left hemiplegia.

She made a good recovery as far as the aphasia and the paralysis of both sides was concerned, but the ptosis and palsy of the rectus internus remained unaltered.

The last type of syphilitic hemiplegia to which I will draw your attention to-night is that where the paralysis comes on, not more or less suddenly, but quite slowly. In February, 1885, I was consulted in the case of a young man, aged twenty-three, who, after infection only eight months before, was taken with insidious symptoms of gradually increasing hemiplegia of the left side. As he was in a highly nervous condition, and so depressed in spirits that he would often burst out crying, apparently for no earthly reason, his affection had been diagnosed as hysterical, and he had been treated with iron and phosphorus, and shower-baths. The loss of power had appeared at first in the left leg, the patient being unable to lift his foot well from the ground, and scraping it when walking. After a time the fingers of the left hand had likewise become affected; the patient was very clumsy in dressing and eating, and had to give up playing on the piano. Paralysis of the lower branches of the portio dura eventually came on, causing deformity of the face when laughing, and difficulty in whistling. Headache and drowsiness then intervened, and the intellect became clouded.

This case was peculiar for the unusually early appearance of so-called tertiary symptoms, viz., eight months after the primary sore; and this had at first no doubt prevented a due appreciation of the cause of the illness. Treatment by inunction was now resorted to, and showed the disease to have been truly specific, for there was manifest improvement in a few days, and the patient eventually made a very fair recovery.

You will readily admit that the several types of syphilitic hemiplegia which I have just sketched differ *toto cœlo* from the ordinary form of hemiplegia which occurs in the aged from hemorrhage or softening, while they differ no less considerably from one another. Indeed, while twenty cases of ordinary hemiplegia, taken quite promiscuously, are very much alike, there is hardly a single case of syphilitic hemiplegia which exactly resembles another; and it is this extraordinary variety in their clinical aspect which constitutes one of their most characteristic features. But is this peculiar grouping of symptoms sufficient to render the diagnosis of specific brain disease certain? Such is not the opinion of Fournier, who states that there is not a single pathognomonic symptom whereby we can distinguish idiopathic from syphilitic hemiplegia, and that we must rely for our diagnosis not only upon the peculiar development of the nerve symptoms, but also on the presence of venereal affections in other organs, such as the skin, the testicles, the bones; on the fact that syphilitic hemiplegia occurs not so much in the aged as in persons in the prime of life; and that we can arrive at certainty only by the results of specific treatment, as the latter may cure the syphilitic variety, while mercury and iodide of potassium remain ineffectual in ordinary hemiplegia.

I am bound to say that I consider this latter test, viz., by the results of treatment, a very fallible one, as specific treatment fails to cure a very considerable number of cases of hemiplegia where there can be no doubt whatever about the specific nature of the complaint. I have, however, for some time past been of opinion that there exists one truly pathognomonic symptom whereby we are able to distinguish at a glance the syphilitic from the ordinary form of hemiplegia, and this symptom is an excessive exaggeration of the deep reflexes or tendon phenomena, which is present in syphilitic cases and wanting in idiopathic cases.

In 1882 I showed a syphilitic patient at the Clinical Society of London, in whom this symptom was so characteristic that it attracted my special attention. In that case the tendon phenomena were so much increased in the paralyzed leg that it shook fearfully on the least provocation, such as a sudden noise, opening the door, introducing the catheter, sneezing, coughing, etc. Percussion of the patellar ligament, of the tibia, and, in fact, of almost any point of the limb, induced violent so-called spinal epilepsy, which lasted for a considerable time, and was very greatly in excess of what is seen in ordinary hemiplegia.

Another patient, when his patellar tendon was only touched, stamped the ground so violently as (according to his own saying) almost to bring the house down; and it is an interesting fact that this excessive exaggeration of tendon reflexes is not at all in proportion to the degree of the paralysis or muscular rigidity which may be present. Indeed, I have seen it in cases of syphilitic hemiplegia as well as of monoplegia, where the loss of power, although quite definite, was yet comparatively very slight; and it is a symptom on which I now chiefly rely in my diagnosis of these cases. Of course, it can only be utilized where the reflexes on the healthy side are normal, for there are patients, more especially of the neurasthenic type, and also those suffering from the various forms of spastic paralysis, in whom these reflexes are everywhere greatly exaggerated, and in whom, therefore, such an appearance would not have the same significance. The exaggerated response occurs in the upper as well as in the lower extremity with equal force and readiness; but the symptom is habitually not quite so marked in cases where the paralysis has come on gradually, than where there had been a sudden stroke.

I regret I have no time left to speak of the influence of treatment in this and similar conditions. It is, however, a singular fact that, while the therapeutical results in syphilitic nervous affections are sometimes exceedingly gratifying, they should in other instances be just the reverse. There is a general impression in the profession that the prognosis in specific lesions is altogether better than in ordinary idiopathic disease; but this is only partially true, for many patients suffering from cerebral affections on a syphilitic base, even if energetically treated on a specific plan, do not recover, and either remain stationary or undergo a rapid process of further deterioration, ending habitually in general paralysis of the insane. This apparently incongruous fact is, however, well accounted for by the circumstance that we have, in brain-syphilis, to do not only with specific lesions, but also, with the secondary consequences of such; and that these latter cannot, in the nature of things, be expected to yield to anti-syphilitic treatment. No doubt a gumma in the subarachnoid space may be absorbed, and thickening of the dura mater reduced; but where a gumma has already caused wasting of cranial nerves by strangling their substance, or where the occlusion of an important cerebral artery has led to softening of a certain

area of cerebral tissue, such secondary and non-specific lesions cannot be cured, for no amount of mercury and iodide of potassium, or, in fact, any other drug, can restore nerve-cells and fibres which have once perished. It is, therefore, only possible to cure those patients in whom the primary specific lesions have not as yet conduced to secondary ordinary lesions. The lesson which we have to learn from this should therefore be to subject patients, as soon as they show the slightest definite symptoms of specific brain-disease, at once to an energetic anti-syphilitic treatment, so as to disperse the primary and truly syphilitic lesions, and to prevent, as far as possible, the formation of secondary ordinary lesions, against which latter our remedies are known to be powerless. What occurs in syphilis of the brain thus affords a striking illustration of the truth of the old Hippocratic maxim, ὁ δὲ καιρὸς ὀξύς—the opportunity is fleeting. Let us, therefore, always endeavor to make use of it before it is too late.

SOME CONSIDERATIONS ON HYSTERIA.

By MARY PUTNAM-JACOBI, M.D.,

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(Concluded from page 401.)

Where the social conditions are favorable, the intellect normally active, yet for a time inhibited under the tyrannous influence of a sensation or an association, change of scene certainly has a most extraordinary influence upon hysterical patients. The hyper-excitability of their cerebral sensory centres renders them morbidly susceptible to the influence of visual as of other centripetal impressions, and to the associations generated by these. Hence the material objects in a locality where painful events have transpired constitute real sources of peripheric irritation, incessantly renewing the first. In one case that I knew, a young French lady received, at six o'clock one afternoon, the news of the result of a criminal trial, which, in deciding adversely to her step-father, broke off a project of marriage for herself. Every day for a year at the same hour, when a certain bell struck, the girl had an attack of fever.

Change of scene.

In another case (Case XXXIV.) a woman of considerable intelligence, but who, for several years, had exhibited distinct hysteric symptoms, was thrown into a condition of profound mental and physical prostration by the death of her mother. This condition was complicated by insomnia, and attended by a degree of psychic pain which the patient subsequently described as "the tortures of hell." At the end of two months the symptoms were unabated, and the attending physician began "to suspect organic disease of the spinal cord." The patient was then sent to another city, and immediately began to improve. Without further treatment than a daily seance of faradization, which cured the insomnia, she rapidly recovered.

When change of occupation and change of interest can be added to change of scene the influence is still greater. The more areas of the cortex that can be awakened to functional activity, the more chance there is for resisting sensory inhibition; the more vaso-motor inhibiting power is restored to the cortex, the more the intracerebral circulation of impressions is quickened, centrifugal currents established, and, if we may hazard again the hypothesis already enunciated, the more the surcharged sensory centres may be discharged.

Psychic resistance to sensory inhibition.

The foregoing influences all bear upon the mental processes of the brain, finally elaborated (it is probable) in its "latent zones." By affecting these, visceral disorders are frequently relieved, not because they did not exist before, but because the visceral functions of the brain in controlling vaso-motor spasm have been indirectly modified, and the disorders resulting from vaso-motor excitation are therefore controlled. After the psychic, the second great function of the brain which sustains inhibition in hysteria is the motor. Treatment directed to the stimulation of this function may be expected to be beneficial in the same way, and for the same reason, as the moral treatment briefly alluded to. Many special modes of treatment are already in use for hysterical symptoms, whose real value probably consists in their common power to modify the fundamental condition of hysteria. Thus faradization, massage, Swedish movements, active gymnastics, horseback, and other non-systematic exercise, the health-lift, all energize the cerebral motor centres.[1]

Treatment to increase motor resistance to sensory inhibition.

Early in this paper has been quoted Meynert's ingenious theory of the development of the power for voluntary action, through registration in the brain-cortex of impressions or images of movements which have been effected involuntarily, through subcortical reflex arcs. Now, when a muscle is contracted involuntarily by the application of a faradic current, an impression of the movement may similarly be expected to be registered in the motor centres of the cortex. An accumulation of such impressions should so stimulate these motor centres as perhaps to enable them to escape from the inhibiting influence of the sensory areas.

Faradization was first used in treatment of hysterical paralysis. But there is no hysterical symptom to which theory, confirmed by experience, does not show it to be adapted. In the severe Case XXIV. insomnia was relieved by it, after having resisted poisonous doses of narcotics.

Faradization in hysteria.

When the current is applied over the surface of the body without contracting the muscles, the effect of registrating a muscular contraction cannot be obtained. The effect is, however, often beneficial, except where there is hyperæsthesia of the surface, which is usually aggravated by faradization. Can it be inferred that in this case the ingoing electrical current, or rather the nerve-current it excites, inhibits the excitation of the sensory centres of the brain?

Case XXVII.—This fragile patient has already been mentioned as the subject of transient albuminuria. While feeling very weak and wretched, with pains in back, bowels, and uterus, she had a seance of faradization lasting half an hour. One electrode was placed at the nape of the neck, the other passed over the abdomen. The patient at once began to feel better, and during two days following was most remarkably improved, all pains disappearing.

Such cases could easily be multiplied. They are in everyone's experience, but the results are very variously interpreted. Weir Mitchell[2] only mentions the local effect upon muscles supposed to become better nourished when forced to contract by electricity. The common idea seems to be that the electrical current in some way takes the place of nerve-force when the latter is deficient; an idea that is certainly erroneous. The faradic current can replace the nerve-current in liberating energy from a muscle-cell, just as, under certain circumstances, mechanical stimulus can do the same thing. The improvement of non-paralytic symptoms noticed in the hysterics who do respond favorably to faradization implies, however, central stimulation. The current directly stimulates the negative, indirectly the positive, work of the nerve-centres to which it is brought. The "strengthening" effects noticed, therefore, partly indicate increased negative work throughout nerve-centres (in the foregoing case, probably chiefly in the medulla), but there is also partly increased positive work consequent on this; thus, in sensory centres, liberation or discharge of energies in a centrifugal direction.

[1] Other effects are, of course, produced through the increased inspiration, circulation, and muscular nutrition, but these are apart from the special problem under consideration.

[2] Fat and Blood.

Massage, the Swedish movement-cure, and systematic gymnastics are all directed toward the exaltation of deficient motor force. In passive massage, while the surface friction increases the mass of centripetal impressions, in a manner analogous to surface faradization, the passive contraction of the muscles by the movements of the limbs may be supposed to register impressions in the cortex, as in the performance of reflex acts.

Massage and gymnastics.

When the patient is incited to resist impassive movement by voluntary effort, as in the Swedish movement-cure, a higher degree of stimulus of cortical centres is affected. The intracerebral nature of this higher stimulus approximates the action more to normal action. Finally, in active gymnastics, the stimulus is entirely voluntary, the action entirely normal. The method, which cannot be utilized at the beginning of treatment of hysterical paralysis, is inestimable in the treatment of all other conditions. Theoretically, voluntary muscular effort, the physical correlative of mental volition, should be, with it, the cardinal resource in the treatment of hysteria; for it addresses itself to the fundamental condition of the disease—the depression of motor function below the level of sensory function; and it tends to restore the normal centrifugal direction of intracerebral nerve-currents.

Fundamental treatment of hysteria.

I was led to formulate the above statement thus precisely from observation of the special mode of muscular exercise afforded by the Butler Health Lift. I first tried this in some cases of amenorrhœa, not at all with the view I at present entertain, but for the purpose of increasing blood-pressure in the pelvis and thus restoring the menstrual flow. The two cases in which this method received a fair trial have already been mentioned.

Health lift.

Case XXX. and Case XXXI.—In Case XXX. the menstruation had been absent for two years, although up to that time it had been quite regular; the patient was only moderately anæmic, and retained excellent muscular strength, as shown by her capacity to speedily attain a lift of ninety pounds. The patient was also constantly occupied in family duties, especially in waiting upon a sick father, so that moral and even motor centrifugal currents might seem to exist in sufficient abundance. But she suffered from prolonged dyspepsia (though, as shown by the stomach-washing, very rarely from gastric catarrh), from constipation and flatulence, and the psychic symptoms of depression and hypochondria had been extremely marked. It was while these were at their maximum that the amenorrhœa began; they had much subsided when I first had charge of the case, and the dyspepsia was a good deal relieved by the stomach-pump treatment. This was interrupted, however, and by my advice the patient hired a health-lift and exercised on it regularly. At the end of a month the dyspepsia was much improved, and the patient felt in every respect better. At the end of two months she menstruated. She then was able to return to a mixed diet. The third month there was a little delay, only a day or two, in the return of the menstrual flow; a single local application of galvanism brought it on. This had previously been tried with no effect but the production of nausea.

In Case XXXI. the first improvement in the patient's health, after three years of almost constant suffering, was observed during a summer spent at Lake Mohonk, where the patient practised rowing. During these three years menstruation had occasionally occurred spontaneously, and had several times been brought on by local applications to the uterus of laminaria tents and iodine, internally. These applications, however, often failed, and when they succeeded in determining a uterine hemorrhage, the patient usually felt worse after them, with more headache and prostration. The month preceding the visit to Lake Mohonk an iodine application had been followed, not by menstruation, but by a four weeks' leucorrhœa. It was noticeable that during this period, as with any other peripheric irritation which lasted a short time, the patient was relieved from headache; but she claimed to feel "wretchedly," and expressed the greatest horror of the experience. In September the health-lift was begun; in October the patient menstruated, exactly a year from the last date. She subsequently menstruated in February, April, June, and July. Coincidently, the headaches greatly diminished in frequency and intensity, ovarian hyperæsthesia entirely disappeared, and the patient felt distinctly and "immensely better."

That in this last case the improvement was not due to the fact of menstruation was indicated by its absence when the menstruation was brought on by other means. The spontaneous appearance of the flow during the use of the lift was an indication, not a cause, of improvement. The patient always felt better during two or three weeks preceding a spontaneous menstruation, and always worse after one, whether spontaneous or artificial. During the month which followed the second menstruation after the health-lift the patient was wretched, with severe headache; but after the last two menstruations remained well.

I think the details show in this case, as in the other, that with the revival of the motor function of the cortex its inhibiting power over the vaso-motor centres was revived, the vaso-motor fibres in the utero-ovarian nerve were restrained from their excess of action, and an arterial afflux of blood permitted to the endometrium. Probably, also, the nutritive processes of growth on the endometrium, the ovary, and the plexus were coincidently permitted to resume their course.

In another case (Case XXXII.) there was no amenorrhœa, but the patient, who had been excessively hysterical previous to the replacement of a retroflexed uterus, continued after this to retain some hysterical symptoms. She remained rather weak, and her power of walking was much interfered with by a pain occupying a limited area of the right vaginal wall, apparently in a branch of the pudic nerve. This pain was ascribed by the patient to the pessary, an instrument which had greatly excited her imagination. It seemed, indeed, to be the last remnant of the multiform distress that had first attended the most careful use of the pessary, and certainly had nothing to do with the latter. Under the use of the health-lift this pain entirely disappeared, the patient became able to walk, and was in every respect well.

It is noticeable that in all three of these patients electricity, however applied, invariably aggravated whatever symptom it was applied for.

I am prepared to believe that the health-lift will prove an invaluable remedy in the cases in which it can be tried, and when it is used efficiently. It is rare that this can be done by visits to a physician's office; the patient should buy or hire a lift, and have it at home for daily use. Each session occupies an hour, since the lift must be handled four times, at an interval of fifteen minutes between each lift, occupied by complete repose. Either one or two sessions a day, according to strength of patient, should be prescribed.

Sphygmographic tracings were taken of several patients, not always with uniform result. Figs. 1 and 2 were taken from a woman, aged thirty-seven, suffering from hysterical pain at epigastrium, hypogastrium, left ovarian region, in track of ilio-hypogastric nerve, over left hip, and at point of emergence of two upper sacral nerves. Pelvic organs perfectly healthy.

The trace just before the lift is irregular in the individual pulsations; shows numerous elasticity oscillations, almost absence of respiratory curve. This was taken after the patient had already used the lift several times, the last half an hour before. The trace taken immediately after shows an enormous development of the percussion stroke, part of which may be due to increased force of cardiac contraction, but part certainly to diminished tension, as the line collapses (in the first three figures) almost immediately from the summit. The respiratory line rises, showing the increased depth of respiration.

Figs. 3, 4, and 5 (from Case XXXII., with persistent neuralgia in branch of pudic nerve) show a decided increase of tension from use of lift.

Figs. 6 and 7 show a marked development of the percussion stroke and a rise of the respiratory base-line. This patient had a (corrected) retroflexio uteri, and was recovering from a prolapse of the ovary, but was rather free from hysterical symptoms.

Figs. 8 and 9 are from a girl, aged sixteen, who had never menstruated, and was suffering much from headache. The pulse developed considerably by the lift, tidal wave and tension increasing. The girl's health improved very much during the fortnight she used this, coincidently with walking, but she then, for some unknown reason, ceased attendance.

The increased heart-action noticed in all these traces was the direct result of the muscular effort. The collapse of the line in Figs. 1 and 2, as well as the increased tidal wave in the other figures, both imply diminished vaso-motor tension—in the first case simply lowering the resistance, in the others permitting dilatation of blood-vessels.

It is to be noted that if this is not accomplished, and the arterioles remain contracted while the energy of the cardiac contraction is increased, there will be fatigue, cardiac distress, and palpitations. Undoubtedly such cases will present themselves in practice. The danger can be avoided by the careful graduation of the weight to be lifted, avoiding such as shall too suddenly increase the force of the cardiac contraction.

I have known horseback riding to restore an interrupted menstruation as efficiently as the health-lift. Between the latter, active gymnastics, and horseback exercise, it is possible that there may be little to choose. Still, as with all other remedies, a case which resists one will often be found to yield to another apparently quite analogous. The health-lift is much cheaper than horse back riding, and it has this advantage over calisthenics, that the amount of force exercised is much more independent of the patient's will. When the movement to lift has begun, it must be finished, and with the same weight; must always be performed with the

Horseback and other exercise.

FIG. 1.—Before lift.

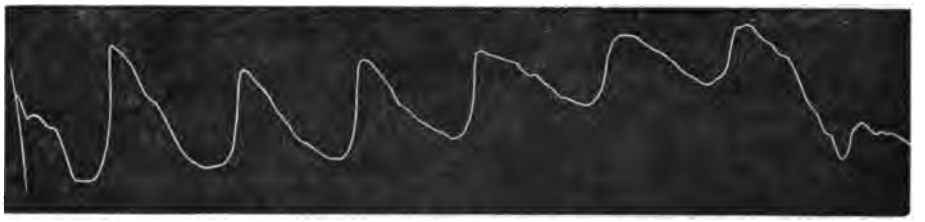

FIG. 2.—After lift. (Ten pounds.)

FIG. 3.—Before lift.

FIG. 4.—After first lift at five pounds. (+ weight of machine = twenty-five pounds.)

FIG. 5.—After third lift at fifteen pounds. (Thirty-five pounds.)

FIG. 6.—Before lift.

FIG. 7.—After lift.

FIG. 8.—Before lift. (After walk just before lift.)

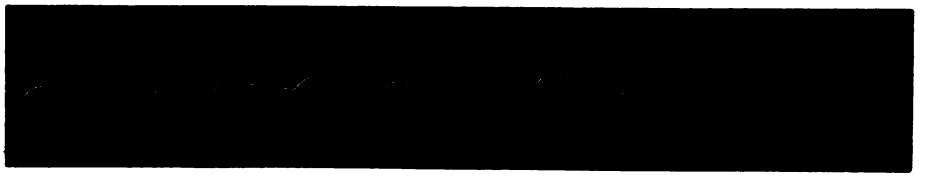

FIG. 9.—After three lifts. (One at five, two at ten, pounds.)

same degree of force. But it is very possible for dumb-bell and other calisthenic exercise to be carried out so listlessly and feebly that no effect is produced at all. All the foregoing methods of motor treatment are much superior to walking; of which, in a great many cases, the patient is quite incapable. Walking may be found to increase ovarian hyperæsthesia, or headache, or backache, or any other symptom. The effect of the health-lift in increasing the force of the circulation, and hence the amount of oxygen carried to the tissues, and especially the brain, may be secured by another physical apparatus—the Waldenburg machine for compressed air. I have obtained the most prompt and marked relief to hysterical dyspnœa and intercostal pains by this method, where there was not a trace of pulmonary disease. One patient purchased an apparatus, and to her daily use of it, for a year, seemed chiefly attributable the relief, not only of the respiratory symptoms, but of many others from which the patient had suffered for seven or eight years.

Waldenburg apparatus.

This winter I have applied the same treatment to an anæmic girl (Case XXXV.), a subject for many years to slight epileptiform attacks, resembling petit mal, and also to neurotic symptoms, such as Gowers calls "post-epileptic hysteria;" the principal during severe nervous headaches, mental inability, and sense of universal fatigue. The inhalations did not diminish the number of epileptiform attacks, though these were greatly controlled by nitrite of amyl. But the improvement in the hysterical symptoms was very marked, so much so that the patient was ready to believe herself on the high road to complete recovery. The relief was always immediate, and especially after a petit mal attack.

It is to be presumed that the increased amount of oxygen forced into the lungs under pressure relieves the "dyspnœic" condition of the brain-tissues induced by vaso-motor spasm.

The effect of electricity upon hysteric pain has been already discussed. In this discussion has been pointed out the variableness of this influence. This might be inferred from the complex action of electricity, part of which may fall in the desired direction, another part just in the reverse. Thus the passage of the constant current through a nerve tends to lower its excitability, and ultimately paralyzes it; the anode depresses, the cathode exalts, the excitability of same nerve; the centripetal impression sent to nerve-centres first increases their negative work, chemical synthesis, and storage of force; muscular contractions by faradism or interrupted galvanism divert nerve-energy from sensory centres. It is evident that some of these effects tend to antagonize pain, yet the centripetal excitation of the sensory centres should tend to increase both pain and its cause in the existing hyper-excitation of these centres. Where the latter is very great, any form of electricity does harm. In proportion to the more localized diffusion of the pain, electricity seems to do good, though with many exceptions. For general action faradism is decidedly preferable to galvanism. Galvanism may sometimes locally overcome vaso-motor irritation.

All modern studies of hysteria tend to relegate drugs to the background in the treatment. The array of antispasmodics—musk, assafœtida, valerian, ammonia, etc.—which figure even in Briquet's treatise, are to-day utilized only for occasional and symptomatic treatment. This really still leaves a large sphere of usefulness for these remedies in the management of these often exquisitely unfortunate patients. The treatment of vaso-motor dysmenorrhœa especially calls for suitable "antispasmodic" remedies, while musk has extraordinary value in the attacks of profound prostration which are common. The value of opium in hysterical vomiting. of digitalis in hysterical irregularity of the heart's action, of ergot in the pelvic congestions which so often initiate or maintain hysterical conditions, need only be mentioned here.

Drugs.

The internal use of strychnine should be classed among agents which act directly on the motor system. It diminishes resistance to the transmission of impressions through the cord.

It is a matter of course that the treatment of anæmia by meat, iron, cold pack, shower-bath, mountain air, is often indicated in the management of hysteria, and when indicated becomes of the utmost importance. A richly meat diet is nearly always indicated, for the reason that the ingestion of albumen in abundance is the most powerful agent for increasing the absorption of oxygen. Yet the same persons who habitually require meat may from time to time require to completely abstain from it for a few days, during attacks of (liver?) indigestion associated with copious deposits of sand in the urine. There is an hysteria whose basis is lithæmia—form not infrequent in men as well as women. But there is also an intercurrent gastro-hepatic indigestion that seems to be associated with vaso-motor congestions of the liver, and consequent interference with the functions of the gland in the elaboration of urea. It is probable that transient diabetes would often be discovered if looked for, as in the case of severe neurosis already mentioned.

The association of obesity with hysteria is very frequent. Weir Mitchell observes that it is much more difficult of treatment than the hysteria of thin people. The necessity for meat diet, with restricion of liquids, is here as great as in the cases where the obesity is associated with organic heart and kidney diease.[1]

The nutrition of the nerve-centres is impaired in proportion to the deposit of nutritious material in cellulo-adipose tissue, and the permanent hyperæmia of this.

The two following cases strikingly illustrate the effect upon hysterical symptoms, in one case including amenorrhœa, of appropriate diet, with massage and hydrotherapeutic treatment.

Case XXXVI.—Married, three or four children; large and very fat woman, weighing two hundred pounds. Since increase of weight, during a year, profound prostration of strength, with hysterical depression, crying, trembling of limbs on walking, palpitations on exertion. Heart probably overlaid with fat; no other disease. Placed on meat diet, gluten-bread, liquids restricted; tincture nux vomica, cold pack, with massage and cutaneous faradization three times a week. Great improvement in a month. In six months patient had lost forty pounds and was feeling quite well. Diet continued for a year.

Case XXXVII.—Married woman, aged thirty; three children. Rather short woman, but weighed two hundred and forty pounds. Psychic depression, palpitations, amenorrhœa for seven months. Packs, massage, meat and gluten-bread diet. Immediate and striking improvement. Reduction in weight averaged three pounds a week. Menstruated six weeks after beginning treatment, and thence regularly. Spirits improved at once. Treatment continued five months; patient then quite well. At close of year weighed one hundred and fifty-eight pounds.

The *removal of the ovaries* for intractable hysteria is indicated in two different classes of cases: (1) Where their diseased condition is a source of masses of nervous impressions, improperly called reflex, which irritate the sensory centres of the brain and determine the series of consequences which follow on this irritation; (2) where the ovaries are normal, but the irritability of these same centres, acquired in other ways, has become such that the normal impression generated in the menstrual processes causes intolerable irritation. I have known of two cases where Battey's operation was performed with entire relief to an immense train of morbid symptoms, which in one case included eight years' paraplegia, besides untold pains, dysmenorrhœa and other. In neither did the ovaries appear abnormal to the naked eye; in one which I was able to examine by the microscope the morbid changes were very slight.

Oöphorectomy.

[1] See Oertel: Therapie der Kreislauf's Störung, 1884.

The first case has been reported by Dr. Mundé,[1] who performed the operation, and has been already mentioned in this paper.

Theoretically, it is perfectly logical, in cases of hyperexcitability of cerebral sensory centres which have resisted all other means of treatment, to remove the ovaries in order to cut off from these centres the large mass of centripetal impressions which reach them when the rhythm of menstrual processes is going on. It has been abundantly shown that this operation is not often immediately successful; either because menstruation persists or because the nervous phenomena persist in the absence of menstruation. Both, however, tend to subside with the lapse of time, and I think that it is only after two years that we should, if at all, call the operation a failure. I have known several cases where the morbid symptoms persisted nearly to this time, but disappeared afterward.

The facility of abusing the operation is, however, obvious; but the statistical discussion of its value does not lie within the scope of this paper.

A CASE OF PISTOL-SHOT WOUND OF THE SMALL INTESTINE AND MESENTERY—LAPAROTOMY.

By CHARLES A. JERSEY, M.D.,

ATTENDING SURGEON TO THE MANHATTAN HOSPITAL, NEW YORK.

R. G. B——, aged forty-four, very fleshy, and of poor physique, was brought from his home to the Manhattan Hospital in an ambulance on July 1, 1886, at about 8 P.M. About twenty minutes before admission to the hospital, he had shot himself with a pistol, calibre 32.

On admission he complained of intense pain in his abdomen, particularly localized about the umbilicus, "screwing" in character; great tenderness on the left side of the abdomen on pressure, no swelling or tympanites. Examination showed a blackened bullet wound about one and a half inch to the right of the median line, and one inch above the umbilicus; the wound was not probed. The abdomen in the region of the wound was washed with a one-twentieth solution of carbolic acid, the wound stuffed with iodoformized gauze, covered with borated cotton, and an abdominal binder applied.

The patient was perfectly conscious, very restless, surface cold and covered with a profuse perspiration, pulse very rapid and feeble, temperature 98° F., respirations shallow, rapid, and feeble. Majendie's solution of morphine, and whiskey and digitalis were administered hypodermatically, and the hot-air bath applied. Urine examined and found normal.

July 2d, A.M., pulse, 134; respirations, 34; temperature, 101° F. The patient recovered very slowly from shock; he has had no vomiting, and no movement from the bowels; he complains of abdominal pain and tenderness, and is very restless. He presents no recognizable symptoms of internal hemorrhage. He has had ten minims of Majendie's solution every three hours since his admission to the hospital, because of pain.

Twenty hours after admission laparotomy was performed, with the assistance of Drs. W. T. Bull, L. A. Rodenstein, and Drs. Wilkie, Hathaway, and Aymé, of the House Staff. All the instruments and appliances used, excepting the black Snowden's silk, had been soaked or boiled in a 1 to 20 solution of carbolic acid; warm water, at about a temperature of 100° F., was used for the towels and sponges during the operation. Ether was administered; an incision was made in the tract of the bullet wound, showing its direction to be downward and inward, a finger introduced, and the intestine felt, proving conclusively the entrance of the ball into the abdominal cavity.

An incision was then made in the median line, extending from about three and a half inches above the umbilicus to about four inches below the same point. On entering the peritoneal cavity a small quantity of bloody serum flowed out, probably an ounce. The small intestine was now carefully removed from the abdominal cavity, each portion being thoroughly examined as it was withdrawn. A few patches of fibrinous exudation were removed from the gut; there was no adherence of the intestinal coils; the portion of intestine removed was enveloped in towels wet with warm water, and drawn above and to one side of the abdominal incision. Small quantities of bloody serum, and a few clots of coagulated blood, escaped through the abdominal wound from time to time as the gut was being removed, probably amounting in the aggregate to six ounces.

The following wounds were discovered:

First, a ragged, irregular hole, about three-fourths of an inch in diameter, situated on the free border of the intestine, from which, while handling, a small quantity of fecal matter escaped; a small amount of fæces escaped from all the other wounds in the intestine, but not into the peritoneal cavity; from this wound the contents of the gut escaped directly into the abdominal cavity before sponges could be applied to prevent this mishap. The intestine in the neighborhood of the wound was thoroughly sponged off with warm water, the edges of the wound inverted, and the hole in the intestine closed by seven sutures according to the method of Lembert.

Second, a small hole near the mesenteric border was closed by three sutures.

Third, a bullet wound exactly opposite the previous one, evidently the point of exit of the ball (it having passed directly through the gut), was about three-fourths of an inch in diameter; this was closed by seven sutures.

Fourth, a small wound on the free margin of the gut was closed by four sutures.

Fifth, in the mesentery, near its attachment to the gut, was an abrasion about one inch long by half an inch wide; this was simply dusted over with iodoform.

Sixth, a large, irregular, perforating hole in the mesentery, close to its attachment to the intestine, through which the index-finger readily passed, and in which a bleeding vessel was ligated; the hemorrhage from this artery had stopped, but was renewed while manipulating the wound. The wound was thoroughly dusted with iodoform, and its abraded surfaces and edges drawn together by four sutures passing directly through the mesentery.

Seventh, a perforation of the mesentery, two inches from its attachment to the gut; this was also dusted with iodoform, and its edges drawn together by two sutures on each side of the mesentery. The sutures were not passed directly through as in the previous wound.

The peritoneal cavity contained a small quantity of bloody serum and numerous clots of coagulated blood, which were sponged out. The intestine and peritoneal cavity were washed thoroughly with warm water, dried, and carefully sponged. The gut was returned to the cavity, and the abdominal wound closed by numerous sutures of silver wire and heavy silk, both wire and silk being passed through the peritoneum. The wound was dressed with iodoform, the bullet-wound stuffed with iodoformized gauze, absorbent cotton, and an abdominal binder applied.

The patient suffered severely from the shock of the operation and recovered slowly. Hypodermics of whiskey and digitalis were administered, and the hot-air bath applied.

July 3d.—9 A.M.: Pulse, 130; respirations, 28; temperature, 100.5° F. 6 P.M.: Pulse, 136; respirations, 29; temperature, 102° F.

The patient complained of no pain; he vomited continually during the day; given whiskey and digitalis, cracked ice, and hypodermics of Majendie as required. In the evening the vomiting continued; he has had no

[1] New England Medical Monthly.

particular pain, but slight tenderness on pressure over the abdomen. A cold coil was applied.

July 4th.—9 A.M.: Pulse, 134; respirations, 30; temperature, 102° F. The patient has had constant retching and vomiting, which could not be controlled. He complained of little pain during the night, but was very restless. This morning he is very restless and delirious; is given whiskey and digitalis and morphine as required. During the afternoon he failed rapidly, became comatose, and died at 3.10 P.M.

Autopsy. — The abdomen contained a quantity of flocculent serum; the intestines were distended, slightly adherent and congested, and covered with patches of fibrinous exudation. The wounds in the gut were all impervious, and covered with heavy patches of exudated fibrin. The abrasion in the mesentery was covered with fibrin. The edges of the two perforating wounds in the mesentery had separated, and their surfaces were covered by a blackened, softened slough, discharging pus into the peritoneal cavity. All the wounds had been discovered when the operation had been performed. The bullet was not found. An extended autopsy was not permitted by the patient's relatives.

The point particularly worthy of attention in this case is the condition of the perforating wounds in the mesentery. The result of the autopsy showed conclusively that a mistake had been made in the treatment of these wounds. The portion of mesentery surrounding the bullet-holes should have been excised, all the contused border removed, and then the healthly surfaces brought together by sutures. This is the procedure I should follow should a like occasion again present itself. The question of excision of the bullet-holes was discussed at the time of operation in this instance; but, unfortunately, was not done because of the fear of interruption of the circulation, and consequent gangrene of the gut.

234 West 132d Street.

Clinical Department.

AN IPMROMPTU STOMACH-PUMP.

Dr. Charles N. Dixon Jones, of Brooklyn, writes: "Apropos of the article on 'An Impromptu Pump for Stomach Irrigation,' by Dr. S. E. Post, allow me to relate the following instance of inventive ingenuity. About four months ago I provided a patient, suffering with gastric catarrh and dilatation, with the simple siphon apparatus and a cocaine solution, for stomach irrigation. From experience he found that the siphon did not at all times act as satisfactorily as was desirable, so he resorted to the following modification: He obtained a three-way stopcock, made from gas-pipe. To one limb of the stopcock he attached the stomach-tube; to the opposite limb a large fountain-syringe was attached by means of rubber tubing; the outlet was connected with a rubber tube, to the extremity of which could be attached a large rubber-bag syringe, such as is commonly used for a flower-sprinkler. The apparatus is worked as follows: The stomach-tube is introduced, and then the stopcock so manipulated as to allow the fluid to flow directly from the fountain-syringe into the stomach. After sufficient fluid has flowed into the stomach the stopcock is turned, so that the fluid may flow back through the outlet. If it does not flow readily, the bag syringe is attached, and by compressing this a few times a powerful suction force is induced. At the same time compression of the syringe a few times in rapid succession will cause a swashing and churning of the fluid contained in the stomach, so that the walls are thoroughly cleansed. Of course, such an instrument is capable of numerous modifications and improvements, but this gentleman constructed it to meet a special indication, and, as far as I know, independently of any knowledge of the use of the principle involved in medicine."

NÆVUS VASCULARIS MATERNUS OF THE EAR.

Dr. William C. Pipino, of Des Moines, Ia., reports the following case: "In November, 1882, Gilbert P——, aged two years, of Montgomery City, Mo., was brought to me to be treated for a 'cancer on his ear,' as his father expressed it. His history was, that a few days after birth his mother noticed a slight discoloration or purplish spot on the helix of his right ear, which did not occasion any alarm until after the first year, when it began to increase in size until it reached the dimensions as depicted in the figure.

Fig. 1.—A, tumor; B, line of incision.

"The family physician, understanding the nature of the growth, advised immediate treatment, but, with the reluctance that usually attends such cases on the part of parents, they deferred treatment until the growth had attained sufficient weight to cause the ear to lap over. Being assured that the removal of the growth would not be followed by evil results, they reluctantly consented to have it removed. I endeavored to remove the nævus by electrolysis, and, after inserting the needles on two different occasions without any perceptible diminution or change in the size of the growth, it became evident that other means must be resorted to. The operation of Kipp, so strongly recommended by Burnett, was next attempted, viz., to make an incision along the border, and dissect the skin off the tumor, and when the latter is fully exposed, carry the knife behind it and sever its connection with the subcutaneous tissue. This failed, for the reason that the skin was also involved in the growth. An incision was then made in the direction of the dotted lines, B, through the skin and cartilage; in other words, the growth was amputated, care being taken to go beyond any involved tissue. The cartilage was trimmed with curved scissors and the edges of the skin brought together by a sufficient number of sutures. Union was brought about by first intention. The case is interesting: 1, From the size of the nævus, which was 2½ inches long, 1 inch thick, ⅝ inch deep; 2, from the fact that its seat involved the whole of the helix, the lobule being the favorite site for these vascular growths. It may be well to mention in this connection, for the benefit of those who believe in 'maternal impressions,' that the mother declares that, when she was carrying this child, she had occasion to separate a dog from his hold on an old sow's ear, which was left lacerated and bleeding."

New Method of Treating the Vomiting of Pregnancy.—At the Medical Congress at Nancy, M. Gairal, Sr., presented an apparatus which he called a uterine basin, the object of which was to check uncontrollable vomiting in pregnant women, and to support the womb, which had become too heavy, by bringing it in permanent contact with a liquid which would cause local anæsthesia.

Progress of Medical Science.

STIMULANTS AS RETARDING DIGESTION.—A correspondent writes, in the *British Medical Journal:* The extended consumption of one or the other of this class of substances points to the existence of some beneficial effect to be derived therefrom, although what this consisted in it has been difficult to say, judging otherwise than subjectively. Sir William Roberts, of Manchester, has lately suggested an ingenious hypothesis, which offers a plausible explanation of their use. Man, in a state of nature, would derive his sustenance presumably from materials which, from their being raw, or at any rate imperfectly cooked, would be necessarily but slowly digested and assimilated. With civilized communities, on the contrary, everything is done with the view of facilitating digestion, by the removal of indigestible parts of the food, or by submitting them to processes which favor the action of the juices with which they are to be brought into contact. Under these circumstances, it is quite possible that digestion and assimilation may proceed at a speed not only unnecessary, but even disturbing, to the equilibrium of the organism, and provocative of waste. The employment of alcohol, tea, coffee, etc., would tend to correct this undesirable acceleration of the assimilative processes; for Sir W. Roberts has proved, by a series of carefully conducted experiments, that their effect is powerfully to retard the action of the various digestive ferments on the foods; and it may be that the instinctive sense of the benefit thereby derived lies at the root of the yearning of all civilized nations for such substances. Again, some condiment, such as common salt, is added to restore sapidity to articles from which the salts have been removed in the process of cooking; and, taken in excess, it only throws extra work on the organs of excretion.

COLLOID CIRRHOSIS OF THE LIVER.—Dr. Mattei, in making a post-mortem examination on the body of a woman seventy-seven years old, found a liver presenting externally all the appearances of atrophic cirrhosis. On microscopic examination numerous globules were found in the interlobular spaces, and some also in the substance of the hepatic lobules. These globules were of varying size, shining, translucent, colorless, and homogeneous. Further examination showed that these bodies were made up of colloid material. The author is of the opinion that a granular condition of the liver may depend solely on the presence of colloid globules and of embryonal cells in limited points of the interlobular spaces, and accordingly gives the name of colloid cirrhosis to the condition found.—*Rivista Clinica e Terapeutica*, September, 1886.

ARTIFICIAL RESPIRATION IN SUFFOCATIVE CATARRH.—Dr. B. Morpurgo reports two cases of suffocative catarrh in which great service was rendered by rhythmical compression of the thorax. He found that every compression of the chest was followed by more abundant fluid râles, and that a deeper spontaneous inspiration followed every forced expiration. The author finds that the effects are twofold—mechanical or direct, and automatic or indirect. The first consists in the direct expression of the fluid as a consequence of the pressure exerted upon the infiltrated lungs. The second effect is a strengthening of the respiratory centre in the medulla, by reason of the inspiratory stimulus which succeeds the forced expiration, and of the supply which it receives of blood less charged with carbonic acid.—*Il Raccoglitore Medico*, Vol. 2, No. 6, 1886.

A PECULIAR AFFECTION OF THE LOWER LIP.—Dr. O. Moretti describes an unusual condition which he has met with several times in the neighborhood of Recanati, in Italy. It attacks especially the poorer classes, males rather than females, and rarely those under twenty years of age, and is observed only during the summer months, from April to September. It consists of superficial ulcerations of the lower lip, the greater diameter of which is usually parallel to the buccal aperture. The formation of the ulcers is preceded by pain, swelling, and heat, and not infrequently there is considerable attendant fetor. The ulcerations are very painful, and the pain is increased by eating or by any movements of the lip. Many facts would seem to show that the disease arises from contagion, and sometimes it recurs in succeeding years at about the same time. That it is of parasitic origin would seem to be demonstrated by the uniformity of the symptoms, the mode of transmission, and the results of specific treatment. When antiseptics are used a cure is obtained in a few days, but when treated by ordinary means the ulcers usually persist for many weeks.—*Il Raccoglitore Medico*, Vol. 2, No. 6, 1886.

HEMORRHAGIC SYPHILIS OF THE NEW-BORN.—Dr. Andronico reports. the case of an infant born of a woman who, in the second month of pregnancy, had a chancre on the vulva. From the first days of life the child had coryza and marked icterus; soon after numerous points, of a copper-red color appeared on the skin, and obstinate hemorrhage took place from the umbilical cord. The child died on the ninth day. Another case is reported by Dr. De Luca. A woman acquired syphilis from her husband, and some years later gave birth to a child. The infant suffered from pemphigus, and soon after the bulli became filled with blood and petechiæ appeared on the legs. Finally uncontrollable hemorrhage took place from the gums of the lower jaw, the umbilical cicatrix, and the intestines, and the child soon died.—*Giornale Italiano delle Malattie Veneree e della Pelle*, August, 1886.

HYSTERICAL APOPLEXY.—M. Debove relates the case of a man, thirty-one years of age, of good physique, who, on rising from the table suddenly lost consciousness and remained in a comatose condition for two hours. There was at first complete motor paralysis of the left side, but the next day there was only a slight paresis accompanied with hemianæsthesia. The author based his diagnosis of hysterical apoplexy upon the absence of the ordinary causes of an apoplectic attack, and on the existence of other signs of hysteria. M. Debove believes that the anæsthesia met with in subjects suffering from poisoning by alcohol, lead, or mercury, is not always due to the direct influence of the poison, but is often hysterical in character, although it is true that the hysteria itself may be symptomatic of the poisoning. The anæsthesia which accompanies organic brain lesions is usually seated in the same regions as the motor paralysis. Irregularity in the intensity of the anæsthesia, and its change in location under the influence of the magnet, are arguments in support of the hysterical nature of the affection.—*Le Concours Médical*, No. 34, 1886.

SALICYLIC ACID IN DIPHTHERITIC CORYZA.—Dr. Domingo Gonzalez has employed salicylic acid with excellent results in diphtheria with invasion of the nasal mucous membrane (*Gaceta Médica Catalana*, September 15, 1886). The following are the conclusions which he formulates concerning the treatment of this affection: 1. Diphtheria is a local disease, always grave, but often curable if energetic local treatment be employed from the first. 2. Cauterization with nitrate of silver in strong solution, or with hydrochloric acid, is the treatment from which the best results may be expected. 3. When diphtheria invades the nasal fossæ, cauterization of the affected parts being no longer possible, treatment must be limited to the local application, by either insufflation or irrigation, of antiseptics. 4. Among the agents comprised in this category salicylic acid is the most efficacious, since, in addition to its properties as an acid, it is a powerful antiseptic, and is devoid of toxic effects. 5. Spraying the parts with a four per cent. solution of chlorate of potassium and borate of sodium is a valuable aid to the treatment by salicylic acid.

HYDRATE OF CHLORAL IN THE VOMITING OF PREGNANCY.—Dr. Federico Leon relates the case of a woman who had always suffered so severely from vomiting during her previous pregnancies, that it was several times proposed to bring about premature delivery. In her sixth pregnancy the vomiting was just as severe, and in addition there was a most alarming ptyalism. Cold was applied externally and internally without the least effect, and equally useless were opium, bismuth, alkalies, pepsin, blisters over the stomach, and subcutaneous injections of morphine. The patient became delirious, not recognizing any members of her family, was greatly emaciated, and seemed to be nearing dissolution. Finally, after all other remedies had proved ineffectual, a trial was made of rectal injections of chloral in doses of thirty-five grains four times a day. The evening of the day in which this treatment was begun, the patient slept well, and on the third day the vomiting ceased, and the woman begged for food. She was allowed to take whatever she wanted, and chose the most indigestible substances. But the vomiting did not return, and the cure was complete.—*Nouvelles Archives d' Obstétrique et de Gynécologie*, No. 8, 1886.

ASSAFŒTIDA IN HABITUAL ABORTION.—Professor Paolo Negri reports in *Lo Sperimentale* for August, 1886, two cases of habitual abortion successfully treated by assafœtida. The first case, seen in consultation with Dr. Bianchetti, was that of a lady, young and in apparent health, who had been married seven years. The first pregnancy was arrested at the third month, the second went on to term, and then followed five more which were interrupted at periods ranging from the second to the seventh month. Both the lady and her husband were free from disease of any kind, and nothing abnormal could be detected on examination of the genital organs to account for the repeated miscarriages. Various measures had been tried in previous pregnancies, but without relief. Upon the appearance of symptoms indicating the beginning of another pregnancy assafœtida was ordered, the patient took the remedy regularly, and though there were occasional slight hemorrhages, the pregnancy went on to term and the woman was delivered of a living child. The second case was that of a lady who had had four miscarriages in succession, none of her pregnancies ever having gone on to term. When in the third month of her fifth pregnancy she was seen by Dr. Negri. No signs of syphilitic disease could be discovered in herself or her husband, nor was there any other apparent cause for the repeated abortions. Assafœtida was at once ordered, and the patient persevered in the treatment, taking toward the end of her term as much as eighteen grains of the gum resin per diem. The pregnancy was uninterrupted by any accident, and went on to full term. Although the number of cases was so small, the results were nevertheless so good as to warrant the author in advising a trial of assafœtida in all cases of habitual abortion for which no cause can be assigned.

THE PATHOGENESIS OF PSEUDARTHROSIS.—Dr. A. Bonome contributes to the *Archivio per le Scienze Mediche*, vol. x., No. 17, 1886, a study, based chiefly upon experiments on animals, of the causes which contribute to the formation of pseudarthrosis after fractures and resections. These causes, he says, are chiefly comminution of the bones, the interposition of soft parts between the opposing fragments, separation of the divided ends of the bones, the abolition of nervous function, and diminution or temporary suspension of the arterial circulation. The interposition of soft parts, not associated with any other complication, facilitates the formation of fibrous tissue, which, uniting with that arising from the periosteum and from the medullary portion, gives rise to fibrous pseudarthrosis. In fractures with separation of the opposing fragments, the connective tissue which unites the ends of the bone is derived in part from the medulla and in part from the periosteum. In fractures made experimentally in long bones, soon after paralysis of the limb caused by resection of the nerves, there is usually a formation of callus, though it is slight. But after a certain time, not over thirty to thirty-six days, a rapid absorption of the callus, with necrosis of the newly-formed osseous trabeculæ takes place, in consequence of which the bone at the point of union becomes very friable. In fractures occurring while there is present a notable diminution in the arterial circulation of the limb, there is very little regeneration of the periosteum and medulla, and a somewhat extensive necrosis of the ends of the divided bone takes place. The place of the necrosed portion is taken by connective tissue, starting from the medulla and periosteum, which constitutes the fibrous connection between the fragments and forms the pseudarthrosis.

THE FUNCTION OF THE COCHLEA IN THE ORGAN OF HEARING.—In a young man who was suffering from otorrhœa, and from whose ear during syringing a piece of bone (the upper turn and a half of the cochlea) came away, Dr. Stepanoff instituted a number of experiments to determine the function of this part. (*Meditsinskoye Obozreniye*, No. 3, 1886.) As a result of his studies he came to the following conclusions: After destruction of the upper portion of the cochlea the perception for deeper tones (contrary to Helmholtz's theory) is not lost, nor is there any defect in tone-perception, either in whispering or in loud talking. This, however, does not prove that the cochlea plays no part in tone-perception, just as the retention of the power of hearing in rudimentary development or necrosis of the semicircular canals is no evidence that these have no part in the perception of sound. The author concluded that we have as yet no facts which would warrant us in localizing the perception of various sounds, such as tones, noises, and speech, in different parts of the labyrinth.

THE NATURE OF THE PIGMENT IN ADDISON'S DISEASE.—In the *Correspondenz-blatt für Schweizer Aerzte*, Nos. 15 and 16, 1886, Dr. Ernst Kummer, assistant to Professor Kocher, of Berne, ably details two cases of Addison's disease, in one of which intense urobilinuria was present. Professor Nencki was able to isolate (by evaporating an amyl-alcoholic solution) about 0.4 gramme of urobiline from the patient's urine, collecting during twenty-four hours. Indican was nearly absent. The author dwelt on the question of the origin of the pigment which caused a "bronze" discoloration of the integuments in Addison's disease. As is known, Professor Nencki and Dr. Berdez have succeeded in isolating the coloring matter of human melanotic sarcoma, the so-called phymatorhusin, which has no relation whatever to hæmoglobin, since it contains more than eleven per cent. of sulphur (*Archiv für Experim. Pathol. u. Pharmac.*, vol. xx., p. 346), but is closely related to hair-pigment, as Dr. Nadjeda Sieber's researches have shown (*ib.*, p. 362). It would be possible to admit that the pigment of Addison's disease is either phymatorhusin, or hair-pigment; but then the urine should contain an increased amount of non-oxidized sulphur. Since nothing of the kind is observed in the disease in question (Lichtheim), the author comes to the conclusion that the "bronze" pigment is a product of hæmoglobin. He supports his view by pointing to a universal diminution of red blood-corpuscles, and an absolute reduction of hæmoglobin in Addison's disease.

ELECTRIC BATHS IN EYE DISEASES.—Professor Denti states that he has found electric baths and douches very valuable in several ophthalmic affections, especially in those which refused to yield to more ordinary methods of treatment. His apparatus consists of a vessel of water placed at a height of two metres above the patient's head, a constant current battery of thirty cells, and a glass or ivory box without a bottom. This box is fitted on to the eye. It contains a metal pipe communi-

cating by an india-rubber tube with the water-vessel, from which the box can be filled with water; an efferent non-metallic pipe is also provided. The metal pipe is connected by wire with one pole of the battery, the other electrode being placed on the forehead or crown of the head. The sittings are of from four to six minutes' duration. For baths eight or ten cells are used, for douches twenty or more. No unpleasant effects have ever been observed, the stimulating action being only sufficient to produce a slight degree of hyperæmia. The author finds that the baths are best in deep-seated affections, such as those of the vitreous or of the optic nerve; the douches are useful in more superficial affections, such as those of the conjunctiva and cornea. Dr. Denti tried the electric baths in six cases: four of atrophy of the papilla in different stages, one of disseminated cloudiness of the vitreous, and one of double ulcerative blepharitis. The papillar atrophy was benefited most when it was slightest. In one case of atrophy accompanying disease of the spinal cord, the intra-ocular affection was, or appeared to be, arrested. The patient with the cloudy vitreous was so much improved that, though at first he could scarcely distinguish large objects, after thirty sittings he was able to read ordinary print. The patient with blepharitis was completely cured. The douches were employed six times: in three cases of paralysis of the eye muscles, and in three of exudations remaining after ulcerative keratitis. One of the cases of paralysis was entirely cured, the other two being improved; and in the cases of keratitis the success was most marked, the exudation being completely absorbed.—*The Lancet*, July 17, 1886.

Successful Extirpation of the Spleen.—*La Gazzetta degli Ospitali* (May 23d) reports a case from the surgical clinique of the University of Genoa in which Professor A. Ceci removed a greatly enlarged spleen. The patient, an imperfectly developed and very thin girl, aged seventeen, with very small pulse, had had an abdominal tumor from birth. The anterior surface was smooth and convex, the margins sharp and fissured. The posterior surface presented a large lobe on the left. The abdominal walls were very flaccid, so that the tumor could be completely rotated vertically and transversely, and also be pushed into the left hypochondrium, whence, however, the respiratory movements soon caused it to advance to the front of the abdomen. The liver was in normal position. The enormous size of the floating spleen interfered with the patient's movement and nutrition, and was an occasional source of very severe attacks of pain, radiating from the left hypochondrium to the præcordial region and the left upper limb, and attended with violent dyspnœa and insensibility. Extirpation having been resolved upon, it was performed on March 20th, with strict antiseptic precautions. The incision in the linea alba from above downward through the umbilicus was nine and a fourth inches in length. On opening the abdomen, serious signs of suffocation compelled the suspension of the operation for nearly thirty minutes. Anæsthesia having been commenced with bichloride of methylene, chloroform was substituted for it. A triple catgut and carbolized silk ligature having been applied to the pedicle, it was dropped in. The peritoneum was sutured separately. The abdominal walls were brought together by three metallic points, after Billroth's method. The splenic artery was larger than the subclavian. The whole operation, including the interruption, lasted an hour and a quarter. Violent delirium and nervous phenomena simulating angina pectoris soon followed. For two days the pulse could not be counted, and the respiration varied from 70 to 80 per minute. The treatment was by oxygen and nutritive clysters. The wound was first dressed on the eighth day, and almost the whole of the wound-tract suppurated. In spite of strict antiseptic treatment erysipelas supervened, and yet the patient recovered. On April 22d (thirty-one days after the operation), her condition was reported as excellent, only a small superficial wound remaining. The extirpated spleen, with the contained blood, weighed 77.16 ounces. A courteous note just received from Professor Ceci states the patient is in good health; pulse 80; respiration 22; weight increasing rapidly; complexion florid.—*Lancet*.

Sub-pleural Laceration of the Lung.—Mr. Timothy Holmes has recently related a case in which a girl, aged fourteen, had fallen and severely bruised the right breast. There was no fracture of the ribs. The leading symptoms were hæmoptysis, great dyspnœa, and entire absence of breathing in the right lung. The right chest did not move in respiration; it was natural on percussion. These symptoms, with the history of her having a piece of biscuit in her mouth at the time of the accident, led to some suspicion of the impaction of a fragment in the right bronchus; but the progress of the case negatived this idea. The dyspnœa was at first so alarming that tracheotomy almost seemed indicated. Next day, amphoric breathing was heard under the angle of the right scapula, and this developed into the physical signs of a large cavity in the lung, but without any sign of fluid or air in the pleura. This cavity gradually contracted, and the girl quite recovered. It is noteworthy that subcutaneous emphysema appeared at the right side of the root of the neck on the third day. When last seen, the girl, though in perfect health, had evident physical signs of considerable consolidation of the right lung. In commenting on this case, the author quotes Nélaton's descripton of the symptoms of sub-pleural laceration (including emphysema at the root of the neck) as exactly verified by the symptoms here observed. He remarks on the slight attention which is bestowed on this form of injury in most of our text-books, and the doubts which he has himself expressed in his own work as to the possibility of diagnosing the sub-pleural form of laceration. These considerations, together with the comparative rarity of such cases would, he believes, justify the publication of this case, but it also contains a feature of its own, which has not hitherto been noticed in the history of the lesion, viz., the entire suspension of respiration in the injured lung. The cause of this phenomenon was discussed, and reference made to other cases of sub-pleural laceration.—*Provincial Medical Journal*.

Melanotic Whitlow.—Mr. Jonathan Hutchinson writes, in the *British Medical Journal*: When melanosis fungates, and when it affects the glands, we must not expect the larger growths to be of a black color. The power of producing black pigment appears to be, in most persons, very limited. The original growth, beginning, it may be, in the rete of the skin, or in the choroid of the eye, is coal-black, but the later and larger growths are white, or show only here and there a pigmented streak. To make the diagnosis at these stages it is necessary to look carefully at the skin near the margin of the fungus. Here a little colored border may often be found, looking as if lunar caustic had been applied, which tells the tale. There is a rare form of disease of the nail-bed which is malignant, and usually takes the type of melanotic sarcoma. It is generally attributed in the first instance to injury, and its diagnosis is always missed in the early stages. Because it resembles whitlow, and is usually so named at first, I prefer to give it that name. It is, however, from the beginning, malignant. Careful observation will find at the edge of the inflamed nail a little border of coal-black color, and this, however slightly marked, must be allowed to make the diagnosis. I have seen at least half a dozen of these cases. Early amputation is demanded.

M. Bouchard has managed to induce cataract in rabbits by introducing naphthaline into the digestive canal. The quantity required for the purpose was a daily dose equal to a thousandth part of the animal's weight.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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AN ALLEGED SUCCESSFUL TREATMENT FOR TUBERCULAR MENINGITIS.

TUBERCULAR meningitis is the most fatal of the acute diseases of childhood, and though serious in character it is by no means infrequent. In France it destroys annually twenty-five thousand children, while in large cities like New York it makes up about two per cent. of the death-rate.

Medical art will probably never be able to achieve any great therapeutical triumphs with this disease, and its main efforts must be directed toward its prevention. Still, there are undoubtedly recorded cases of cure after the disease has developed; such, for example, are the cases reported by Bókai and cited by Steffen. It behooves the physician, therefore, never to despair of success, even in well-marked cases. The main reliance in tuberculous meningitis has been the use of potassium iodide, cold, and counter-irritation to the head. Traube has claimed much for inunctions of gray salve in very large doses.

Recently there comes from several sources evidence of the value of inunctions of iodoform ointment in large amount.

In the *Revue Internationale des Sciences Médicales* for October, 1885, Dr. Eug. Martel cites a case of tubercular meningitis treated successfully by Dr. E. Nillson, by the use of iodoform ointment. Dr. Martel tried the method temporarily in one case, with the result of producing marked alleviation of symptoms. But he was not able to follow up the patient, who, eight days later, died.

Moleschott, in the *Wien. Medicin. Woch.*, 1878, Nos. 24 to 26, reports five cases of tubercular meningitis treated by iodoform, one of these being a complete cure. He simply painted the neck and mastoid processes with three to four grammes of iodoform collodion, one to fifteen.

Dr. Souden, of Stockholm, treated a case diagnosticated as tubercular meningitis by himself, Dr. Waern, and Professor Abelin, with inunctions of iodoform ointment, one to five. The patient, a girl three years of age, got completely well.

Dr. F. W. Warfvinge, however, if his observations can be trusted, has had the most brilliant results. He reports five cases of tubercular meningitis, all of them cured under the use of iodoform inunctions. The cases are reported in full (*Hygeia*, 1886, p. 499; *Revue Internationale des Sc. Méd.*, August 31, 1886) and certainly some of them were typical illustrations of tubercular meningitis as it is ordinarily seen. In one of the cases iodide of potassium was also used, and in all various symptomatic remedies, such as ice-caps, chloral, antipyrin, etc., were employed when indicated.

The method of treatment followed by Dr. Warfvinge, consists in shaving the head and anointing it with an ointment consisting of iodoform, one gramme; vaseline, five grammes. This is done twice daily, the head being covered afterward with an impermeable cap. The inunctions were employed in one case for seventeen days, in another for nineteen, in a third for thirty, a fourth for thirty-two, and in the fifth case for nine days.

RECENT EXPERIMENTS WITH PASTEUR'S INOCULATION METHOD IN VIENNA.

SOME time ago Dr. Ullmann, of Vienna, went to Paris and studied Pasteur's method of preventive inoculation for rabies. He brought virus and all the necessary materials for establishing a laboratory in Vienna, and the work of manufacturing the rabbit's cords has been successfully going on. He finally undertook preventive inoculations upon men, and up to a recent date had operated upon sixty-one persons supposed to have been bitten by rabid dogs, so far without a death.

As an offset to these practical results, Professor v. Fritsch has been making some experiments, which appear to show that the Pasteur method is inefficient upon persons who have, beyond any doubt, received the virus into the system.

He took sixteen rabbits and, having trepanned them, inserted the rabic virus directly beneath the membranes. He then began at once to perform the preventive inoculations, as done by Pasteur. Despite these, every one of the rabbits died of hydrophobia, as was shown by inoculating other healthy rabbits with bits of the medulla of the dead animals. Another series of rabbits, for a control experiment, was trepanned and inoculated, but did not subsequently receive preventive inoculations. These also all died. A second series of experiments was performed with similar results, except that one rabbit did survive. A similar experiment with a similar result was performed upon five dogs.

Thus it seems that in cases in which the virus is, beyond all question, deposited in the nervous system the results of preventive inoculations are *nil*. But it must be admitted that Professor Fritsch's tests were very severe, and it cannot be said that they prove that the preventive inoculations are futile when the virus is only deposited in the superficial soft tissues of the body.

A BURIED TREASURE.

MANY have doubtless felt a regret that the valuable collection of books known as the Toner Collection should have been given to the Congressional Library rather than placed in some more accessible location. The Congressional Library has a poor collection of medical works, and its librarian does, or did, not attempt to develop that field, consequently the Toner Collection seems a little out of place. A correspondent of the *Maryland Medical Journal* gives some facts showing the interesting character of Dr. Toner's laboriously gathered treasure:

"Toner's Collection embraces medical and historical books, which number 28,299 volumes of books and 18,615 pamphlets. Besides these, it comprises some 1,500 portraits of medical men, and 3,000 to 4,000 medical biographies in MS., and some 1,500 in print, all arranged for easy reference, in alphabetical order. There are also check lists (similarly arranged) affording references to more than twenty thousand physicians."

As books belonging to the Congressional Library cannot be loaned to physicians throughout the country, unless some special arrangement exists, Dr. Toner's Collection appears to be a good deal of a buried treasure. If it were placed in some large medical centre, like Philadelphia or New York, it would be consulted hundreds of times where it is now consulted once. We make these comments with all respect to Dr. Toner, to whom the profession is already greatly indebted and whose wishes in such a matter must of course be final.

THE SEVENTH VOLUME OF THE INDEX-CATALOGUE OF THE SURGEON-GENERAL'S OFFICE.

THE seventh volume of the Index-Catalogue of the Surgeon-General's Office has just been issued, and adds another to that remarkable series with which our readers are already familiar. Each volume is a monument by itself. The present one contains fourteen thousand six hundred and eighty-eight author titles, representing five thousand nine hundred and eighty-seven volumes, and twelve thousand three hundred and seventy-two pamphlets. It also includes six thousand three hundred and seventy-one subject-titles of separate books and pamphlets, and thirty-four thousand nine hundred and three titles of articles in periodicals. Dr. J. S. Billings, of Washington, D. C., still has the work in charge. And why not! For who could take his place?

DEATH AND BURIAL AT SEA.

SEVERAL times during the past season the press has chronicled the death and burial at sea of passengers on the transatlantic steamers. Lately, the name of a most honored member of the medical profession was added to the list. Many have been led to ask if such a burial is at all necessary. Is it not rather, in the present age of civilization and Christianity, barbarous?

It is now about half a century since steam-vessels began to cross the ocean. Until that time transportation of passengers was in sailing vessels, which required at least a month for an ordinary passage. After that time sailing vessels long carried the great bulk of human freight. It is only during the last twenty-five years that the number of vessels has so greatly increased, and the length of the voyage so shortened, that the trip has become merely a ferriage across the sea. Now one can cross the ocean at little greater expense than is required to go to Chicago. Then medical service was very unsatisfactorily performed on board ship. Now it is, at least, fairly efficient. The length of a voyage was formerly calculated by weeks. It is now a matter of seven or eight days, and with the fastest steamers even less.

In view of all these improvements the question arises, Is burial at sea ever necessary in case of the transatlantic vessels? We do not think it is. There are two sides to every question, but we can anticipate some of the arguments of the advocates of burial. We can at once dismiss, as unworthy of serious consideration, the fact that sailors are reluctant to have a dead body on board. This is not an age of superstition. There are no more shipwrecks in case of vessels leaving port on Friday than on any other day. A craft does not go to the bottom simply because it is deserted by rats. Furthermore, the class of men employed on the steamers are not of the typical "old tar" order, and are not easily affected by sailors' yarns. In former years a vessel was at the mercy of wind and tide. Now the length of a voyage can, barring accidents, be accurately ascertained. The hygiene of vessels is attended to. No such crowding is allowed as before, though it is bad enough as it is, and hence the care of a dead body is no longer such a difficult task.

Every steamer carrying passengers should have a separate air-tight room, which may serve as a morgue. It should be so arranged that it can hold ice enough to thoroughly congeal a body. It should also contain a metallic box of some kind for use in case of death from a contagious disease. After each occupancy it should be thoroughly disinfected. Every ship's surgeon should be required to possess a knowledge of embalming, so that, with persons dying from non-contagious diseases, at least, the body could be suitably cared for. It matters not whether the deceased person be a poor emigrant or a wealthy cabin passenger. On arrival at port the latter's friends could be communicated with. If no friends could be found, a decent burial could be procured at a small cost to the company. If an emigrant dies in Castle Garden immediately after landing, the body is cared for by the Commissioners of Emigration. Simple humanity would demand the same treatment of the remains of those who die on the voyage.

It may be urged that the steamship companies will not take all this trouble. They are, however, common carriers, and are under certain obligations to the public. Law is stronger than the erroneous opinions, or even prejudices, of directors.

ANOTHER CEREBRAL TUMOR SUCCESSFULLY REMOVED.—The patient was a man who had been absolutely hemiplegic for a month, and had passed into a semi-comatose condition. Before these symptoms developed he had endured terrible pain in the head, and had suffered from fits. On Thursday, September 23d, Mr. Victor Horsley trephined over the motor region of the right hemisphere, and, after enlarging the aperture made by the trephine, succeeded in removing a large tumor from the brain; the tumor weighed four and a half ounces, was three inches long, two and a half inches broad, and two inches deep. On the day after the operation the patient was perfectly rational, and even amusing, in his conversation, and said that he was quite free from pain. On September 27th the wound was entirely healed, and the man had recovered some power in his leg. This is the fourth case in which Mr. Horsley has operated successfully on the motor area of the cortex of the brain; the three earlier cases were described to the Section on Surgery at the last meeting of the British Medical Association.

News of the Week.

THE EIGHTH SEMI-ANNUAL MEETING of the Association of the Surgeons to the Pennsylvania Company will be held at the Seventh Avenue Hotel in Pittsburg, on October 19th.

DIOPTRY OR DIOPTRIC.—The quietness of the fall season has been disturbed by two considerable controversies: viz, that over the Jones River, by the *Times* and *Sun*, and that over the question of "dioptric" or "dioptry," by Drs. Loring and Burnett, in the columns of the New York *Medical Journal*. There is no doubt about the Jones River; but whether the ophthalmologist of the future will say dioptry (Burnett) or dioptric (Loring) is a question that still hangs trembling in the balance, the prevailing feeling being: "How happy could I be with either were t'other dear charmer away."

DETROIT HAS NO FREE HOSPITAL, but it is now expecting one. The reports are that the sum of $220,000 has been promised for this purpose.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE contains a membership of 2,108, of whom 280, or about thirteen per cent., are physicians.

THE QUEEN AND THE INTERNATIONAL MEDICAL CONGRESS.—We are credibly informed that Dr. Pancoast, of Philadelphia, has invited Queen Victoria to attend the next meeting of the International Medical Congress.

THE AMERICAN CHOLERA COMMISSION.—Dr. E. O. Shakespeare, who was sent abroad by the Government to investigate cholera, returns a convert to the doctrine of Koch.

A MODEL CHOLERA HOSPITAL AT ROME.—The London *Globe* gives an interesting account of a new cholera hospital at Rome, which the Pope has caused to be built. Contact with the outer world is carefully guarded against by grated windows, telephones, and by a revolving barrel, with half its circumference open, by which provisions are taken into the hospital. The water-supply is drawn from a well, and is quite separate from the city supply. The drain is formed of an iron tube sixteen inches in diameter, the joints being hermetically sealed with lead. There is a disinfecting boiler in which corrosive sublimate is placed. There is a room called the "chamber of observation," which has a staircase leading up to the first floor. In this room dead bodies are placed for a given time, as it is well known that cholera patients often show signs of being quite dead when really only apparently so. The room is, by means of an electric apparatus, in communication with the director's office. The body being laid on a bed, both hands are put into a sort of copper muff; between the hands is put an instrument so sensitive that, should there be the slightest movement of the hands or any other part of the body, this instrument would instantly close the electric circuit, and the bell in the director's office would be set ringing; at the same moment another instrument registers the number corresponding to the bed upon which the body is lying. The chamber is warmed by steam so as to facilitate resuscitation. The laboratory is provided with a gasometer for the storage of oxygen, which is taken to the wards for administration in gas-bags. On the ground floor are four wards for doubtful cases; should they get worse they are sent up in the lift to the cholera wards above, their clothes and bed-linen being immediately burned. Another room is set apart for women in childbirth, and there are two more for undressing patients, so that the infected clothes may be destroyed, the Pope furnishing new clothing for all recovered cases. The cubic space allowed for each bed is thirty-six cubic metres. The ventilation is carried on by means of funnels with gas jets below. The chapel is in communication with the sacristy of St. Peter's, so as to form an easy access for the Pope should he wish to visit the hospital; but before returning into the sacristy, His Holiness and suite would have to go into a room near it for disinfection.

A CURIOUS MEDICO-ETHICAL QUESTION.—The Paris and London press are commenting upon a delicate question in medical casuistry raised by the over-zealousness of a Paris doctor. It appears that a certain Frenchman contracted marriage with a lady without completely disentangling himself from the meshes of another woman. As frequently occurs in France, the deserted one, without any unnecessary delay, proceeded to inflict several rather serious wounds on her lover by means of a revolver. Anxious at any price to preserve silence on a matter so prejudicial to his domestic relations and menacing to the perpetrator of the outrage, the victim contrived to reach home, where he allayed possible suspicions by a story of having been "nocturnally assaulted." The explanation was believed until a medical man was called in, who, not satisfied with acting in a purely professional capacity, subjected his patient to a searching cross-examination, with the result of eliciting the real facts of the case. He then felt himself obliged to take the district *commissaire de police* into his confidence, with the most disastrous effect so far as the happiness and peace of mind of his patient were concerned. The arrest of the woman, and her confrontation with the victim, followed as a matter of course, entailing the publicity which the injured man had so sedulously endeavored to avoid. The question raised is, naturally, whether medical men are obliged, morally or legally, to communicate to the police suspicious facts which may have come to their knowledge in the exercise of their profession. It will be very generally agreed that the doctor in question was unnecessarily prying, and that the interests of society were not helped by his conduct.

TO RELIEVE THE ITCHING IN IVY-POISONING.—Dr. J. W. Little, of Washington, D. C., writes: "Having tried everything I could think of for the intense itching caused by poison ivy, I was at a great loss to know what to do for a patient who was becoming dissatisfied. I concluded to try the following original prescription: Bromo chloralum, ʒ iv.; vinum opii, ʒ ij.; aquæ, ʒ vj. My patient was ordered to bathe the parts freely with this, and informed me that it 'acted like magic' and relieved the itching at once. I have tried the same in other cases, and also in urticaria, with relief."

INOCULATION FOR HYDROPHOBIA.—Hydrophobia inoculation is being practised in Buenos Ayres, with, of course, the usual results.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 22, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. T. MITCHELL PRUDDEN presented, in behalf of a candidate, specimens illustrating *the lesions of typhoid fever*, with perforation of the intestine, on the nineteenth day, and suppurative peritonitis.

Dr. H. N. HEINEMANN presented, in behalf of a candidate, a specimen of *cancer of the gall-bladder and bile-duct.*

MULTIPLE FRACTURE OF THE PELVIS—RUPTURE OF THE BLADDER—SUPRA-PUBIC AND MEDIAN CYSTOTOMY WITH THROUGH DRAINAGE OF BLADDER.

DR. GEORGE F. SHRADY presented specimens taken from the body of an Italian laborer on the aqueduct, who had his pelvis crushed bilaterally by becoming engaged between two moving cars. He was taken to the hospital about twenty-four hours after the accident, when fracture of the pelvis, and rupture of the bladder attended by extravasation of urine were recognized. Dr. Shrady operated immediately for the relief of extravasation of urine by making perineal section. The operation was begun as an explorative one, the steps being taken in accordance with the conditions which successively presented themselves. He performed median cystotomy, and found the bladder contracted, with rupture on the right side. Passing his finger through this rupture it entered a cavity apparently filled with fluid blood, urine, and broken down tissue. Rectal examination revealed a boggy feel at the right side of the bladder, which led to the conclusion that extravasation of urine had taken place through a rupture of the viscus, situated below the peritoneal line, and in order to obtain free drainage and to further explore the bladder he performed the supra-pubic operation. A perforated india-rubber drainrge-tube was then passed through the bladder from one opening to the other, and also perfect drainage of adjacent parts was accomplished by the same means. There was distinct overlapping of fragments at the junction of the pubic and ischiatic bones, and a false point of motion could be obtained, apparently at the right sacro-iliac synchondrosis. He was unable to demonstrate positively the line of fracture on the left side of the pelvis. The patient did well for forty-eight hours. On the third day the temperature began to rise, and death took place on the fifth day, from septic infection. The specimen showed multiple fractures through the ischio-pubic rami and bodies of the pubes, but also a fracture, not at the sacro-iliac synchondrosis, as he had supposed, but through the foraminal line of the sacrum. He had never before seen or heard of a fracture in this locality.

The immediate effect of the operation was very gratifying, but the chances of recovery were overbalanced by the length of time the extravasation had existed, and the nature and extent of the bony lesions. There was a small rupture in the left side of the bladder, which was suspected, but not demonstrated ante mortem. The urethra was torn completely across. The autopsy was performed by Dr. Hodenpyl.

DR. FRANK FERGUSON presented specimens illustrating

CHRONIC DIFFUSE NEPHRITIS AND CARDIAC HYPERTROPHY.

They were from the body of a man fifty-eight years of age, a native of the United States, and a clerk, who was admitted to the New York Hospital August 29, 1886. His mother, father, and one sister died of heart disease.

During the past eighteen years he had had repeated attacks of rheumatism. He never suffered from malaria.

He had a hard chancre twenty-five years previous to his admission, followed by sore throat, eruption, and falling out of the hair, and pains in his legs at night.

He had always been a moderately heavy drinker of spirits.

On the ninth of last February he woke up in the morning with his legs so swollen and stiff that he could not walk. This subsided, and he remained comparatively well up to three weeks before his admission, when he began to suffer from dyspnœa, which increased on the slightest exertion.

He could not lie down, and when he slept he soon awoke with alarming dreams and very great dyspnœa.

Œdema of his legs commenced at about the same time with the dyspnœa, and soon afterward his scrotum became œdematous.

On his admission his temperature was 97° F., pulse 116, and his respirations were thirty-six to the minute.

His urine was acid, had a specific gravity of 1.014, and contained fifty per cent. of albumen; it also contained hyaline and granular casts. There was a large quantity of fluid in the right pleural cavity, and on the 15th of September he was aspirated, and thirty-four ounces of straw-colored fluid withdrawn. After the aspiration the quantity of urine at first increased, and after five days again returned to thirty ounces daily; the specific gravity fluctuated between 1.004 and 1.012, hyaline, granular and epithelial casts remained, with reduced quantity of urea and abundance of albumen. On the 22d he had a slight tonic convulsion and died suddenly.

The peritoneal and pleural cavities contained large quantities of blood-stained fluid. There was very great hypertrophy of the left ventricular wall of the heart, with slight dilatation of the cavity; the muscular tissue was yellowish; the valves were competent; the coronary arteries were normal. Microscopically, the muscular fibres were granular, contained a few fat granules, and the transverse striæ were obscured; more marked on the left than on the right side.

The aorta was atheromatous. The lungs were compressed and pigmented, and were congested and œdematous. The kidneys were very much diminished in size, the capsules were adherent, the surfaces were granular, and the cortices were thin and fatty. The tubes of the pyramids near the apices contained large masses of the urate of soda crystals. The liver was small and stained with bile-pigment. The stomach was intensely hyperæmic, with fatty and granular degeneration of the cells of the gastric tubules. The pancreas was fatty, macroscopically and microscopically. The supra-renal capsules were fatty. The cells of the renal plexus of the sympathetic ganglia were unusually pigmented. The vessels at the base of the brain were markedly atheromatous, and it was on account of this striking appearance that the specimen was presented, as well as the condition of the heart, the kidneys, and the intense hyperæmia of the mucous membrane of the stomach, the organ being quite fresh.

CEREBRO-SPINAL FEVER.

DR. J. LEWIS SMITH presented a specimen with the following history. It was taken from the body of an infant of twenty-seven months, who belonged to the New York Foundling Asylum, and was returned to the institution by the family who had charge of her, on August 23d. The history obtained was as follows: Three weeks previous to admission, she had an attack of eclampsia, and the day before admission another attack. Her state between the attacks was not ascertained, but she was probably well or but slightly ill.

After the second attack the movements in the left arm were impaired, tonic contraction of the left leg remained, and occasional spasmodic twitching of the left arm and leg was observed. At the time of admission she was restless, the pupils were equal, of about the normal size, but her sight was apparently lost, and the pupils scarcely

responded to light; the muscles of the face appeared normal, the left arm was paralyzed, and both the left thigh and leg were flexed, but they could be extended with little force. The rectal temperature on the day of admission was 104° F., the pulse rapid and weak, the bowels constipated; no cough; respiration quiet. Two days later, August 25th, the records state that the *tache cérébrale* was marked, the pupils did not respond to light, and were moderately dilated; temperature 104.5° F.; apparently no rigidity of the muscles of the neck; 4 P.M., temperature, 105° F.; 6 P.M., 107° F. Death occurred at 7 P.M.

Autopsy.—Upper and lateral surfaces of the brain normal; at the base of the brain the pia mater was cloudy, and streaks of fibrinous exudation were observed, especially in the right Sylvian fissure; in the left Sylvian fissure minute whitish points were observed in addition to the cloudiness; the pia mater over a portion of the spinal cord was injected, but no fibrinous exudation was observed upon it.

DR. SMITH remarked that cerebro-spinal fever had been constantly present in New York City since the epidemic in 1871. It has also been endemic for some years past in Philadelphia, Jersey City, Chicago, and some other cities in the United States. The case presented, and another to which he referred, illustrated the difficulty which sometimes existed of differentiating between cerebro-spinal fever, tubercular meningitis, and other forms of meningeal inflammation. A diagnostic point of value was the presence of the *tache cérébrale.*

DR. H. N. HEINEMANN presented a specimen of

PELVIC HEMATOCELE WITH HEMORRHAGE INTO THE ABDOMINAL CAVITY.

T. W——, aged thirty-six, nurse, female, married sixteen years, entered Mount Sinai Hospital September 3, 1886. Her history presented nothing unusual. Three weeks previously she was suddenly seized with cramps in the abdomen, and since then she had had continued pains. Examination revealed a hard mass in the right iliac region, cystocele and rectocele, a uterus measuring two and three-fourths inches, and external os patulous; urine negative. The mass increased in size, casts appeared in the urine, and on September 10th the patient died.

At the autopsy, made with the assistance of Dr. Josephine Walter, the right pleural cavity contained a small amount of serum. The lungs and heart were otherwise negative.

In the abdominal cavity, just anterior to and below the promontory of the sacrum, projecting into the pelvis above the brim, was a firm mass bound down below and to either side, consisting of a blood-clot hemmed in below and laterally, but above extending behind the peritoneum, covering the kidneys, liver, lateral walls, mesentery, small and large intestine, and meso-rectum. In the right meso-colon a large accumulation of clotted blood weighing nearly two pounds was found. The blood about the right kidney had firmly coagulated, forming a cast of the organ. The kidneys were large, pale, and granular, with smooth surface. The uterus contained the remains of a forming placenta, and the mucous membrane was slightly lacerated.

CEREBRAL APOPLEXY WITH REPEATED HEMORRHAGES AT THE SEAT OF THE LESION.

DR. HEINEMANN also presented specimens accompanied by the following history: L. N——, aged twenty-one, United States, clerk, was admitted to Mt. Sinai Hospital July 9, 1886. That morning he was suddenly seized with convulsions and unconsciousness from which he gradually recovered. He had only at times complained of headaches. Upon admission patient was cachectic and had systolic cardiac murmurs; his urine was negative; he had no paralysis. On July 14th he left the hospital. Three or four days after leaving hospital he began to complain of frontal headache and pain in both eyes, and of vertigo. On July 27th he began to vomit; this continued for three days and he re-entered the hospital. He had had no convulsions, nor any paralysis, but complained of his headache; pulse 44; evening temperature 99.6° F. For a week, to August 8th, the patient lay quietly in bed, eyes closed, complaining of headache, but stupid and disinclined to answer. The left arm and leg were slightly weaker than right, and the reflexes diminished upon this side.

Ophthalmoscopic examination, by Dr. E. Gruening, showed neuritis descendens. Left pupil reacted more slowly than right. Both pupils appeared normal and responded to light. Had no facial paralysis, nor of tongue or of uvula. His pulse varied from 44 to 56.

He now, August 8th, became more stupid and irritable, and had a slight convulsion. Urine negative. Four days later, August 12th, he became much brighter, began to recognize those about him and to answer.

During these four days the slight loss of power on left side gradually disappeared and did not return.

From August 8th to September 3d the pulse varied from 50 to 80. On September 3d, pulse rose to 87, and on the succeeding day patient seemed to fail, had a pulse of 120, and evening temperature of 100.5° F.

During this interval of three weeks the patient lay in a semi-stupor, being delirious at night, but having no paresis. His urine was drawn by catheter.

On September 8th he had a chill lasting half an hour; his temperature rose to 104.6° F.; he was almost pulseless; heart-beats, 144; he developed symptoms of cystitis. He had a convulsion, had slight opisthotonos, was restless, pupils slightly dilated, conjunctiva slightly sensitive. He had râles over both lungs, and a systolic basic murmur. The patient remained stupid for four days, when he again brightened up, and on September 14th was able to eat by himself in bed. His headache never left him; was always delirious at night, and stupid at times, even when bright.

The succeeding day, September 15th, his pulse, which had meanwhile been depressed, again rose to 102, and his temperature, which in the evening had been only 100° F., rose to 102° F. He again became stupid, rallied again September 18th, when he could, after effort, be made to answer; but on September 19th died suddenly.

At the autopsy the calvarium was found thin; its inner surface dry. The pia mater was dull, with considerable serum beneath it over the base. The convolutions of the hemispheres appeared flat. In the left frontal lobe, above the gyrus fornicatus, was an ovoid mass, covered still with white brain-substance, which projected to the right of the median line. Upon section, this mass, which was one and a half by two inches, and egg-shaped, consisted of a clot, partly recent but principally of some duration, and quite firm. The brain-substance around about, but not involving the cortex, and extending to the roof of the left lateral ventricle, was involved in yellow degeneration. The lateral ventricles contained only a slightly increased amount of serum. Heart was normal. The bronchial glands were slightly enlarged, and one had calcareous cheesy degeneration at its centre. The bronchial tubes presented evidences of severe recent inflammation.

The spleen was enlarged. The liver was normal. The bladder presented marked symptoms of acute cystitis. The kidneys were swollen, congested, and presented signs of commencing pyelonephritis.

The aorta was narrow, and its walls were thin.

DR. FERGUSON remembered well Dr. Peabody's case, referred to by Dr. Heinemann, in which a man, not more than twenty-one years of age, had died of cerebral apoplexy, and the aorta was found to be not larger perhaps than half the normal size. About two years ago, Dr. Ferguson had presented to the Society a specimen illustrating death from cerebral apoplexy in a man twenty-two years of age, who had always been strong and well,

and Dr. Northrup remarked regarding the aorta that it appeared to be not more than a third of the normal size.

Dr. V. P. Gibney referred to the case of a young man, twenty-two or three years of age, who, on July 3d last, while diving over a railing, struck the head to the right of the occiput, and instantly became paralyzed on the left side. When taken out of the water he was still conscious. There was paræsthesia of various sorts on the right side; the right hand, arm, and leg felt clammy. The left side remained palsied about two weeks, when recovery began to take place. The patient had now regained almost perfect use of that side. There was still some anæsthesia on the right side. There was rotary torticollis on the left side. There was a distinct rheumatic history on both sides of the house. The question suggested itself to Dr. Gibney, may there not have been a hemorrhage into the upper part of the spinal cord?

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 7, 1886.

A. Jacobi, M.D., President, in the Chair.

SOME PHASES OF CEREBRAL SYPHILIS.

Julius Althaus, M.D., M.R.C.P., London, read a highly interesting paper on the above subject (see p. 421).

The discussion was opened by Dr. R. W. Amidon, who directed attention to the influence which a *weak heart* may exert in the sudden development of coma in persons who have chronic disease of the arteries.

Dr. A. D. Rockwell referred to a case in which, together with spastic paresis of the lower limbs, the patient in the beginning had aphasia and hemiplegia which disappeared, but on the following day reappeared and continued for several months. Recovery took place under anti-syphilitic treatment.

Dr. R. W. Taylor thought that the historical part of Dr. Althaus' paper should be somewhat qualified, and that the renown of Virchow and Heubner, however bright it might shine, should not be allowed to obscure the valuable writings of Hildebrandt in 1848 or 1850, of French observers in 1863 or 1864, of the late Dr. Moxon in 1879 or 1880, and also of Van Buren and Keyes, who had directed attention especially to the occurrence of syphilitic hemiplegia.

Dr. L. C. Gray, of Brooklyn, did not look upon the theory of occlusion of the basilar artery as sufficient to explain the supervention of coma; and, moreover, believed that the occlusion of any large vessel at the base of the brain might be sufficient to cause coma, and if it be profound there might be difficulty in determining whether or not it was associated with paralysis.

In the treatment of nervous syphilis he had given up the use of mercury, and had seen undoubted results, whether given early or late, of the supreme value of iodide of potassium; he thought that was the opinion held by most neurologists in this country.

Dr. L. Putzel agreed entirely with the author of the paper as to the value of mercury in the treatment of nervous syphilis. He had found that, after giving the iodide in large doses—large in the New York sense—the symptoms had either not yielded or had yielded very slowly, until mercury had been administered. He now begins with the inunction method.

With regard to syphilitic coma, he thought that all the conditions could not be explained on the theory of occlusion of the basilar artery; if purely the result of this lesion there should be more distinct symptoms of pons and bulbar trouble.

The resignation of Dr. Emil Noeggerath was accepted, and, on motion by Dr. S. T. Hubbard, he was nominated for Corresponding Fellow; referred to the Committee on Admissions.

The Statistical Secretary, Dr. A. B. Judson, announced the deaths of Frank Hastings Hamilton, M.D., LL.D.; Alfred Seymour Purdy, M.D.; Thomas Alexander McBride, M.D.; and John Burke, M.D.

The Chairman of the Committee on Library, Dr. John C. Peters, reported the donation of nearly five hundred bound volumes, together with a large number of pamphlets and medical journals.

The President gave notice that Dr. Althaus would read a paper on "Tetany and Tetanilla," before the Medical Society of the County of New York, Monday evening, October 18th.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

END OF THE VACATION—OPENING OF THE MEDICAL SCHOOLS, WITH INTRODUCTORY CEREMONY OR WITHOUT—LECTURES AT KING'S COLLEGE, ST. MARY'S, ST. THOMAS', AND ST. GEORGE'S HOSPITALS.

London, October 2, 1886.

Medical London is waking up again after the sleep of the long vacation. For a week or more, members of the teaching staff for the several hospitals have been looking round the scene of their labors and preparing their new efforts; while even fashionable physicians, who have given up everything except seeing patients, are coming back to town and are ready to receive guineas. The first of October is the opening day of the winter session, and several of the schools seriously set to work yesterday. St. Bartholomew's and the London Hospital lead off without any ceremony, as they have now for some years discontinued the time-honored introductory address, and one or two others will follow the example. This is not, however, in the way of becoming general, and Dr. Bristowe, at St. Thomas' Hospital, yesterday entered into a defence of the old custom, which certainly finds favor with many of our older teachers. Younger men and students also like some sort of celebration and an opportunity of reassembling old friends.

The industrious example of the London and St. Bartholomew's Hospital is not followed by the majority, and some of our schools, thinking that to begin on Friday with the Saturday half-holiday to follow is rather useless, boldly defer their opening until Monday. Others have taken advantage of the Friday to give the Introductory Address, and defer the real work until Monday, when it can begin in earnest. St. Mary's, St. Thomas', St. George's, and King's College are among these, and though I could only possibly be at one I have learned that all were successful, and some few particulars which will interest your readers. It is not very convenient for our London journals, when the opening day falls so late, as they cannot give any notice of the proceedings until it seems almost out of date as news.

Dr. George Johnson was the lecturer at King's College, and was well received by a large audience. He paid an appropriate tribute to his young colleague, Mr. Royes Bell, who had fallen in the race since the last opening day, and whose death I have already mentioned in your pages. Dr. Johnson spoke earnestly of the value of chemistry, not only for its practical use in a medical career, but as a most important means of training the faculties. Observation, memory, and reasoning power were all exercised when this delightful subject was pursued with energy. He also commended anatomy and physiology to the notice of the students. He then spoke of specialism, and said the only safe foundation for it was a thorough knowledge of disease in general—a proposition which all the best specialists are ready to indorse. Dr. Johnson is somewhat of a specialist himself, but he shines much more as a general physician.

At St. Mary's Hospital Mr. Malcolm Morris delivered the address, and urged the students to "work for work's sake," for the days of "walking a hospital," had long been succeeded by those of "work in a hospital" as the great necessary preparation for practice. He also urged them to avoid alike mysticism, scepticism, and materialism. He professed a hope that medicine would at no distant day destroy the last vestige of mysticism, and he seemed to look to a carefully educated public opinion to bring about this consummation. Though he recognized that medicine had already made wonderful progress, he did not seem fully to credit it with the remarkable strides it has made of late years.

Dr. Bristowe was, as already stated, the orator at St. Thomas', and he spoke warmly of the school and hospital with which he has been so long connected. He paid a cordial tribute to the memory of his late colleague, Mr. F. Mason, whose sudden death a few months ago deprived them of a surgeon who had won the affection and esteem of all who had the good fortune to know him well. In defending the old custom of introductory lectures, Dr. Bristowe said it was a good thing that the daily press gave some account of them, and thus reminded the public of the great educational work carried on in so quiet a way at our progressive schools. In referring to the history of the hospital, Dr. Bristowe, himself an officer of health and a sanitarian, had a sly hit at the "crotchet-mongers," who tried to get the hospital, at the time of its rebuilding, transferred to the country, and he congratulated himself that he had opposed such a notion with all his energies.

Dr. Wadham, senior physician, was the lecturer at St. George's Hospital. He welcomed the new students, and bade them never to be ashamed of the religious and moral principles which they had learned at home. He opposed the formation of medical colleges in which the students were to associate under one roof, and thought it a plan which might rather lead to idleness than otherwise. In a place like London, the university system could not, he thought, be carried out, on account of the impossibility of control being exercised outside the institution. He considered the success of a student depended on his early training more than anything, and that if they had been liberally educated, encouraged in industrious habits, and trained to self-control, they had the elements of success; and by following their work with diligence and acting up to the principles of religion, they could do more for themselves than any institution could accomplish for them.

The other addresses have not yet been delivered, and we are therefore indulging in mild speculation as to the subjects which may be taken up, and which is likely to be held the most successful.

PHYSICIANS' FEES.—The subject of "fees" is of perennial interest to physicians, and a recent discussion of the subject by a professor of medical jurisprudence in a New York college will be of interest. He says on the subject of large fees: "A physician is, of course, completely at liberty to establish a standard of charges as high as he pleases, and he may make it so high that none but millionaires will be able to employ him. No one can object to this. If, then, he does give professional attention to a person who is unable to pay such fees, and chooses to charge him at a lower rate than his custom would warrant, this, also, would be a simple act of charity, to which no one could object. But for a doctor deliberately to add to his usual rate of charges an amount based simply upon the supposed ability of his patient to pay, seems to me to be lowering your profession to the level of soulless usurers, and sacrificing all that is high and noble and philanthropic in it to the mere love of lucre. I do not know that the precise question has ever been presented in this country, but I doubt very much whether our courts would sanction any such practice."—*Henry A. Riley, in Med. and Surg. Reporter.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 3 to October 9, 1886.

BORDEN, WILLIAM C., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Bridger, Wyo., Terr., and ordered to return to his station, Fort Douglass, Utah. S. O. 126, Department of Platte, October 2, 1886.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 230, A. G. O., October 4, 1886.

HAMMOND, JOHN F., Colonel, U. S. A. (retired). Died at Poughkeepsie, N. Y., September 29, 1886.

MATTHEWS, WASHINGTON, Captain and Assistant Surgeon. Granted leave of absence for one month and twelve days, with permission to go beyond sea. S. O. 232, A. G. O., October 6, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 9, 1886.

BROWNE, J. MILLS, Medical Director, U. S. N. Ordered to report to President Medical Board, Oct. 6, 1886.

DEAN, R. C., Medical Director, U. S. N. Ordered to report to President Medical Board, October 6, 1886.

SUDDARDS, JAMES, Medical Director, U. S. N. Will convene Medical Board, October 6, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 2, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	44	12
Scarlet fever	21	4
Cerebro-spinal meningitis	3	3
Measles	55	4
Diphtheria	57	30
Small-pox	0	0
Yellow fever	0	0

NOTHNAGEL ON THE TREATMENT OF PERICARDITIS.—Professor Nothnagel, of Vienna, in a clinical lecture on the treatment of pericarditis, advises that in cases where there is pain in the cardiac region, fever, and the commencement of exudation, leeches, varying in number from three to ten, according to the gravity of the symptoms and the constitution and strength of the patient, should be applied. The leeches should be renewed every four or six days. Cupping may be substituted, but leeches are preferable. An ice-bag should be applied, or a directing apparatus through which cold water can be constantly supplied to the part. Cold compresses are of no use unless they are laid on ice, and then they must be changed every five minutes. Digitalis for internal use is indicated under certain circumstances. It is useful if the cardiac action is greatly increased, especially if there are signs of the heart-muscle becoming implicated, when it should be given in somewhat larger doses. Digitalis is not desirable in the earlier stages of the disease, but in the later ones, when there are signs of weakness of the heart-muscle and the pulse is weak, it is indispensable. Other internal remedies are useless. Mercurialization—viz., calomel in small doses of three-quarters of a grain internally, and gray ointment externally—has no effect. The pain is scarcely ever severe, and if it is persistent it may be relieved by cold and blood-letting. To this a high temperature is no drawback, as the fever subsides as the inflammatory appearances disappear. If effusion has begun, other

means must be used—such as counter-irritation of the skin and the promotion of reabsorption. Ice and bloodletting are of no use in this case. The cardiac region must be painted with equal parts of gall and iodine tincture, or an ordinary cantharides plaster may be applied, which should be kept on from eight to twelve hours till a blister is raised. This is of greater use in subacute than in acute pericarditis. Digitalis does not directly promote reabsorption, but indirectly by its influence on the action of the heart. Should the patient's life be threatened by copious effusion, paracentesis of the pericardium must be performed. This operation is often employed, and with not unfavorable results. Great care must be observed; the pointed trocar of Dieulafoy's apparatus must not be used, but a blunt one like that of Dr. Fraentzel.—*The Lancet.*

THE CURE OF TRAUMATIC TETANUS.—Dr. M. E. Alderson, of Russellville, Ky., referring to a newspaper report of a reputed cure of traumatic tetanus, writes: "To show, in addition to other reports I have seen, that this was not the 'only case of cure of traumatic tetanus in the history of the world,' allow me to refer to a case reported by myself in the *Therapeutic Gazette*, August number, 1881, page 287. It was a well-marked case of traumatic tetanus, which recovered under chloral hydrate and bromide of potash, twenty-five grains each every two hours, and gradually discontinued."

A CASE OF MISTAKEN DIAGNOSIS.—A writer in the *Revue Internationale des Sciences Médicales* relates that he was called in haste one day to remove a chestnut from the œsophagus of a child aged eighteen months. The infant was screaming, and seemed to be suffering greatly. Examination of the mouth and neck showed nothing abnormal, and a sound introduced into the œsophagus passed readily into the stomach. It was supposed that the chestnut had passed into the stomach. On a visit made the next morning a large burn was seen on the child's hand, and the case was then clear. The baby had been playing with the nut alongside of a stove, had burned itself, had lost its chestnut, and its loud cries led the mother to believe that the plaything was lodged in the throat. The case emphasizes the necessity of a careful examination of a child suffering pain, and of not allowing a preconceived judgment to interfere with such examination.

"GO UP, OLD BALD HEAD."—WHAT is more pathetic than to see the simple faith with which a bald-headed man will buy an infallible hair restorative from a bald-headed barber?—*Detroit Free Press.*

IDIOSYNCRASIES.—A number of instances of idiosyncrasy in regard to drugs are related in the *Therapeutic Gazette.* One case was that of a gentleman who suffered from violent diarrhœa whenever he took any morphine. This man's father was in the habit of taking paregoric as a laxative; one teaspoonful of this preparation, taken at night, would always produce soft evacuation in the morning. A resident surgeon at the Pennsylvania Hospital was obliged to resign, because whenever he went to work in the surgical wards he became afflicted with a crop of boils. He afterward found that this was due to emanations from the turpentine which was used for cleaning the skin of patients after adhesive plaster had been applied. Another curious idiosyncrasy was in a lady who suffered from fainting fits whenever she ate butter. She once took a tablespoonful of mashed potatoes, in the centre of which, unknown to herself, a piece of butter had been placed. In a few minutes she fell off her chair in a swoon.

DIFFERENCES IN THE BLOOD OF THE HUMAN RACES.—M. Maurel asserts that the blood is of different degrees of richness in the different races, and gives the following as the result of his investigations on this subject (*Gazette des Hôpitaux*, August 28, 1886). The black race appears to have the richest blood (5,112,256 red blood-globules in a cubic millimetre), then come the Indo-Europeans (Europeans, 5,000,000, and Hindus, 5,008,222), and finally the yellow races (Khmers, 4,474,751; Chinese, 4,334,861; Annamites, 4,238,731). There are also marked differences in the number of white corpuscles. The Hindus have the largest number (5,549), then the Khmers (5,519), Europeans (5,000), Chinese (4,611), Annamites (4,123), and finally the black races (3,823).

A HANDY EMMENAGOGUE.—The common garden beet is said to act as an efficient emmenagogue if taken in sufficient quantity. An active principle is derived from it called betin, of which the dose ranges from two to four grains.

A FEE IN KIND.—During the cholera epidemic in Nashville, Tenn., the late Dr. Bowling attended an old blind negro, who eked out an existence by playing the flute at the street corners. He recovered, and with a heart overflowing with gratitude he took his flute and sat under the doctor's bedroom window and played it the whole night long. Of all the large fees he ever received, the doctor said this was the largest.

A NOTEWORTHY CELEBRATION.—On the first of September there was celebrated in Bologna the centennial of the discovery by Galvani of animal electricity. A commemorative tablet was placed on the house No. 29 Via Ugo Bassi in the year 1858. The inscription recounts the fact that on September 1, 1786, Luigi Galvani first succeeded in causing muscular contractions in a dead frog by electrical action.

NE PASTOR ULTRA PECUDEM.—With these words Dr. Lutaud concludes a short notice of four deaths, after inoculations by Pasteur, which the writer says is a true slaughter of the innocents by Herod the shepherd (*pasteur*), instead of by Herod the king. He concludes: "As long as M. Pasteur was occupied with fermentation processes in beer and wine he could deceive people; when he attempted preventive inoculation of malignant pustule he could conceal his failures and purchase silence by reimbursing the proprietors for the loss of their animals; but he is unable to do this now that he has passed from veterinary to human pathology. Decidedly, M. Pasteur did wrong to leave his beasts." Another sanguinary French duel is in order.

WOMEN IN GERMAN UNIVERSITIES.—It is stated in the *Cologne Gazette* that the Minister of Public Instruction has just decided that women shall not be admitted, either as students or as attendants, upon lectures in any of the universities in Prussia.

THE INFLUENCE OF DRUGS UPON DIGESTION.—Dr. Klikovitch has been conducting a series of experiments to determine the influence of certain common remedies upon artificial digestion, and gives the following as the results obtained: 1. Alcohol. The addition of five per cent. has no influence upon peptonization; from five to ten per cent. retards the process, and more than ten per cent. stops it entirely. 2. Antipyrine produces no effect unless in very large doses. 3. Iodide and bromide of potassium slow digestion slightly in doses of from fifteen to thirty grains. 4. Organic iron salts do not influence the process, but reduced iron and the inorganic salts retard it somewhat. 5. Calomel and sodium arseniate have little effect; sodium salicylate and sulphate and magnesia retard digestion when given in large doses. 6. Chloral hydrate does not influence digestion in doses of less than fifteen grains, but in larger amounts it exercises a very decided retarding action. 7. Sodium chloride, in whatever dose given, has no effect, neither hastening nor retarding the digestive process.—*Deutsche Medicinal-Zeitung.*

DIGNITY IN TITLE.—A lady in advising a friend to seek medical advice said: "Be sure to see a doctor, not a 'doc.'"

THE TENTH CENSUS.—The report of F. H. Wines, special agent of the tenth census, on the defective, dependent, and delinquent classes, is full of interesting details. The number of males confined in prisons and workhouses in the United States in 1880 was 53,604, and of females, 5,005. The number of prisoners to each million of the population was 1,069; in 1870 it was but 853. There were 1,833 insane persons, 1,533 idiots, and 976 blind persons to each million inhabitants. There were 21,595 out-door paupers, and 66,203 inmates of almshouses, during the census year.

OBSTETRICS IN VIENNA.—According to Professor Braun's statistics, there have been during the past twenty-nine years at the Vienna General Hospital 108,889 confinements, with a mortality of 1,945, or an average of seventeen to every thousand. The death-rate has been reduced, by sanitary improvements and the introduction of the antiseptic system, from twenty-eight in every thousand in the first six years to seven, and in 1883 even to two in every thousand cases.

A BATCH OF NEW REMEDIES.—The museum of the St. Petersburg Botanical Garden has received a collection of herbs which are employed medicinally in Northern India. It is stated in *Vratch* that there are in the collection a large number of remedies wholly unknown to Europeans.

PREGNANCY WITH ANTEVERSION.—A correspondent writes for information as to the management of a case of labor complicated with complete anteversion. The pregnancy is now at the end of the sixth month. The writer asks what treatment is necessary in such a case, whether the danger attending labor under such circumstances is greater than ordinary, and asks what are the probabilities of cure of the malposition. The version has existed only about three years.

A SIMPLE APPARATUS FOR DETERMINING THE IMPURITY OF AIR.—Dr. A. E. Burckhardt, of Basle, warmly recommends a simple and small apparatus for determining the amount of carbonic acid in the air of schools, hospitals, etc., invented by Dr. Schaffer, of Berne. The apparatus is based on the fact that diluted lime-water gives a violet-red stain on phenolphtaleïn paper, which stain disappears in the air containing carbonic acid, and does so the more rapidly the larger the amount of the acid present in the air. It is only necessary to mark the time which has been required for the disappearance of the stain, and to consult an appended table which shows the amount of the acid corresponding to the time.—*British Medical Journal.*

A REMARKABLE MONSTROSITY.—A correspondent of the *Lancet* writes: "A more striking and, from the psychological point of view, more interesting monstrosity than the 'two-headed nightingale,' as the poor girl was called when exhibited in these islands some ten or twelve years ago, is described in the 'Historia Rerum Scoticarum' of George Buchanan. In the reign of King James III. of Scotland, there was born in that country, about the year 1460, a creature having the lower part of its body like that of a human being of the male sex, but from the umbilicus upward having a double trunk, double head, double arms, each limb and organ in duplicate, and all quite normally developed. King James was much interested in this phenomenon, the more so as it showed much aptitude for education. He accordingly put it under suitable masters until, among other acquisitions, it became quite proficient in music, for which it had all the taste of a born artist. It also learned to speak several languages, and as it had two wills or faculties of volition, it would sometimes have a quarrel with itself. and argue the point in dispute *pro* and *con*. At other times, when both itselves were in agreement, it would discuss what was best for the common interest. There was this notable circumstance about it, moreover, that when the loins or the lower limbs—any part below the umbilicus, in fact—were hurt, both upper bodies were sensible of the pain. But if either body above the umbilicus were pinched or otherwise made to suffer, one body only felt the lesion. The difference between the two was even more marked when death overtook one of the bodies. The survivor lived after the decease of its neighbor until decomposition began to show itself in the latter, and then it also gradually dwindled away. This took place in the administration of the Regent John, in the nonage of King James IV., about the year 1490, the monster having lived rather more than twenty-eight years. 'Hac de re scribimus eo confidentius,' says Buchanan, 'quod adhuc supersunt homines honesti complures qui hæc viderint' (On this phenomenon we write the more confidently as there are still alive a great many respectable individuals who actually saw what I have been describing.) Buchanan himself was born in 1506, and acted as tutor to King James VI. from 1565 till within a few months of his death, in 1582. It was during the latter years of his life that he composed his great 'History of Scotland,' in Latinity, which was the envy of the Sorbonne."

ELECTROLYSIS FOR NÆVI.—Dr. A. Mayor, of Geneva, published an interesting case of an erectile tumor (a nævus of the cutano-subcutaneous variety) on the back in a girl aged ten months, where he successfully tried electrolysis. The number of sittings was two; the duration of each about two minutes. The dose of the current was only two milliampères (from four cells of Leclanché's battery). On examination of the patient about four years later, not a trace of the nævus (which originally was of the size of a nut) was detected.—*British Medical Journal.*

OUT OF ONE HUNDRED BRAIN TUMORS, Dr. Hale White finds that 10, or possibly 14, might have been treated surgically, provided, of course, a diagnosis could be made.

TOXIC NEPHRITIS.—According to Dr. Muerset, of Twann ("Berne Inaugural Dissertation," 1886), aloïn, oxalic acid, and chromium, on being injected (in a few large, or in frequent small doses) under the skin, in rabbits, produce nephritis, with the principal lesions in the convoluted urinary tubes; while cantharidin and bismuth cause nephritis with the principal changes in the glomeruli.—*Brit. Med. Journal.*

THE USE OF SUGAR SOLUTIONS IN TRANSFUSION.—At a meeting of the Zurich Medical Society, Professor Gaule made an interesting communication on transfusion of a solution containing 3.5 per cent. of cane-sugar, 0.6 per cent. of chloride of sodium, and 0.005 per cent. of hydrate of soda. As his and Landerer's experiments show, the addition of sugar leads to a rapid regeneration of red blood-corpuscles. Thus, a dog with a maximal loss of blood (5.5 per cent. of the body's weight) showed a normal number of blood-corpuscles in eight days after the transfusion. According to the author, tranfusion is indicated —(*a*) when the filling of blood-vessels is altered; (*b*) when the nutrition of tissues is changed; and (*c*) when the function of hæmoglobin is disturbed (poisoning). The transfusion of saline fluids may be effective only in the first case; in the two latter cases transfusion of blood should be performed.—*Brit. Med. Journal.*

TREATMENT OF THE SALIVATION OF PREGNANCY.—Dr. T. Schramm, after trials of many drugs, including atropine, found that bromide of potassium was the best remedy in the severe salivation of pregnancy. Next to this came pilocarpine in doses of one-sixth grain hypodermatically.

PARALYSIS FOLLOWING THE APPLICATION OF AN ESMARCH BANDAGE.—Sir W. MacCormac not long ago removed a necrosed metacarpal bone, using an Esmarch bandage to prevent hemorrhage, and found paralysis of the arm resulting. The condition lasted some time without change, despite the use of galvanism and massage.

A Phase of the Jewish Persecution in Russia.—It is stated in *Vratch* that two cultivated and well-to-do Hebrews, man and wife, were sent by their physician last June to the watering-place of Pyatigorsk. Upon their arrival the lady sent for one of the physicians of the place, who came and recognized the fact that she was in urgent need of medical treatment. But the next morning a police official appeared and informed the patient and her husband that without a special permit from the chief of the district of the Caucasus, or from the Governor-General of Odessa, they could not remain at Pyatigorsk. The physician's certificate of the necessity for treatment was not received, and the patient was obliged to seek relief at Kreuznach.

To Disguise the Bitterness of Quinine.—Engel recommends equal parts of ammonium chloride, and powdered extract of liquorice and quinine as very efficacious in disguising the taste of the latter. When it is desired to dissolve the powder in water, it should be first moistened and made into a paste, which is readily soluble; but if too much water is added at first, the liquorice will float on top of the fluid.

Professor Paul Vogt, of Greifswald, is dead. He held the chair of surgery at Greifswald, to which he was appointed after Hueter's death. He was the author of an excellent work on orthopedic surgery, and various papers on surgical subjects.

The "Notes of an Ambulance Surgeon," written by Sir W. MacCormac, has recently been translated into Japanese.

Excision of the Veins of the Leg.—A correspondent of the *American Practitioner and News* writes from England that a not uncommon operation there, and one which has proved very successful, is excision of varicose veins of the leg. It is considered especially applicable to the saphenous vein in the thigh and popliteal space. The incision necessary to remove a varix need not, of course, be as long as the vein itself, as the vein can be readily drawn out, when it is ligated above and below with catgut, the intermediate piece clipped out, and the wound dressed antiseptically. Of course no Esmarch bandage is used.

Biting off Threads.—Many ladies use their artificial teeth as substitutes for scissors; and such use of them soon renders repair necessary. When told that they should not bite threads with them, they are surprised. But they should be taught not to use even their natural teeth for such purposes. But few think that in biting off a thread the entire muscular force of the jaws in use is concentrated into the small space measured by the diameter of a thread. Besides, thread after thread is applied to the same place on the teeth, and thus the enamel is soon broken there.—*Ohio State Journal of Dental Science.*

Concerning a Case of Diabetes, with gangrene of one finger, Professor Bartholow says: "Withdraw all starchy and saccharine food from the diet, instead use acid fruits and vegetables; if the patient can stand it, skimmed milk is the best diet. Certain mineral waters are useful, as the alkaline waters of Michigan and the Bethesda of Wisconsin; large quantities are necessary, especially in good fat subjects. Ammonium carbonate and sodium phosphate, chloride of gold and sodium, and cod-liver oil likewise serve a useful purpose.—*College and Clinical Record.*

"The Effects of Tobacco on the Health of Men of Letters, and its Influence on the Future of French Literature," is the theme to be discussed in a series of essays, for the best of which the French Society for the Prevention of the Abuse of Tobacco offers a prize of 1,000 francs.

A Chair of Orthopædics in Naples.—The Italian Minister of Public Instruction has officially established a chair of orthopædic surgery at the University of Naples, designating Professor D'Ambrosio for the first incumbent.

Who is Responsible for the Payment of the Physician's Fee?—Several years ago a man entered a restaurant in Berlin and was seen to take poison in a glass of beer. The police ordered the proprietor to summon a physician, and he sent his daughter for Dr. Wilde, who came, and after giving the would-be suicide an antidote, sent him to the hospital. The man recovered, but refused to pay the physician for his services, saying that he had not called him and did not want him. Dr. Wilde then presented his bill for four marks to the superintendent of police, but was told by him to get his pay from the one who summoned him. The restaurant keeper refused to pay, was sued and lost his suit. Then the society of restaurateurs took up the case for the defendant, and the Berlin Medical Society for the physician, and the case was retried, but resulted as before in favor of the prosecution. The society of restaurateurs is, however, not yet satisfied, and has appealed to a higher court. It is now nearly five years since the fee was earned, but the physician has not yet received it, and has spent many times its amount in seeking to recover it.

A Question of Diagnosis.—Some English physicians have been travelling in Northern Italy, and have written to the daily press to the effect that the supposed cholera which has been prevailing in the valley of the Po is really only a very acute form of typhoid fever. The Italian physicians who have treated the cases assert that the disease is true Asiatic cholera, and they are sustained in their diagnosis by another English physician who had been in the Indian military service. It seems more than likely that the latter are correct in their diagnosis.

The Water-supply of European Cities.—It is said that Rome has a more bountiful supply of water than any other city in Europe, there being 591 litres in the twenty-four hours for each inhabitant. Next comes London with 300 litres for each inhabitant. Paris comes third, with 227 litres, then Naples, with 200, then Berlin, with 140, sixth Vienna, with 100, and seventh Turin, with 98.

Experiments on Man.—It is proposed in India to petition the state to turn over the three hundred or four hundred criminals annually condemned to death to an authorized medical commission, for purposes of experimentation, primarily with the view to determine the transmissibility of cholera from man to man. As the subjects of the experiments, if they escape the disease, are to receive a full pardon, it is supposed they will willingly submit themselves to the proposed tests.

Small-pox in Marseilles.—The recent epidemic of small-pox in Marseilles, which has lasted the better part of a year, is now about at an end. There were 1,972 deaths from the disease, of which number more than one-half were in children under ten years of age.

Cremation in Holland.—The Rotterdam section of the Dutch Cremation Society has determined to petition the government to remove the legal difficulties which now stand in the way of incineration of the dead, in order, they say, that the inhabitants of Holland may enjoy the same privileges as those of other countries.

Deaths from Anæsthetics in England.—During the year 1885 twelve deaths were reported in England from chloroform, and three from ether. None is known to have occurred from any other anæsthetic.

Death from the Sting of a Wasp.—At an inquest held not long ago at Bath, England, respecting the death of an old lady, it was found that she had died from the results of a wasp sting.

A "Bush" Doctor's Experience.—Dr. F. O. Hodson died recently at Walgett, N. S. Wales, from a wound received by the accidental discharge of a pistol. The deceased gentleman was but twenty-seven years of age, but held many important offices in the district, and was a writer of no mean promise. Only three days before his death he wrote an account of some of his professional experiences, which we find published in the *Australasian Medical Gazette* for July, 1886. On one occasion, coming home late at night from a visit to the hospital of the township, he was informed that he was wanted at Bumbledumble, some fifty-four miles away. After a few hours' sleep he started before daybreak to ride to the distant town. After riding twelve miles the guide's horse gave out, and Dr. Hodson had to go on alone forty-two miles, without a single house and but one hut on the way. He at last arrived at the place, found a dead Chinaman, made the post-mortem examination, and started home. He returned in a buggy with the owner of the place, but at the fortieth mile the horse gave out, the two passengers were obliged to get out and walk, sometimes pulling, sometimes shoving the buggy along, for a distance of fourteen miles. When at last he arrived home, tired as he was, he had to do all his town and hospital work, without thanks, and with the certainty of having to wait long before receiving the Government pay. An Australian "bush practice" would not seem to be a sinecure.

The Wanderings of a Needle in the Body.—The Paris correspondent of the *Medical Press and Circular* relates a case, occurring in the practice of Dr. Delaire, of a girl who accidentally swallowed a stocking-needle. At first she did not suffer much, but in a few hours she felt great pain in the epigastrium, and soon after in the lower part of the abdomen. She thought she was going to die. Frequent desire to micturate was subsequently felt, and drops of blood were passed. At last, at midnight, fifteen hours after the accident, she felt, after a violent effort, something sticking her at the vulva, she put her hand down and drew out the needle; her suffering was immediately at an end.

The Mortality in Different Cities.—The annual death-rates per thousand in some of the principal cities of the civilized world, according to returns communicated to the Registrar-General of England, are as follows: Calcutta, 17; Bombay, 23; Madras, 34; Paris, 22; Geneva, 10; Brussels, 28; Amsterdam, 22; Rotterdam, 17; The Hague, 25; Copenhagen, 24; Stockholm, 23; Christiania, 31; St. Petersburg, 27; Berlin, 31; Hamburg, 27; Dresden, 32; Breslau, 35; Munich, 29; Vienna, 20; Prague, 30; Buda-Pesth, 33; Venice, 30; Cairo, 53; Alexandria, 57; New York, 34; Brooklyn, 29; Baltimore, 23; Dublin, 20; Edinburgh, 17; Glasgow, 19; Liverpool, 23; London, 18; Portsmouth, 20; Manchester, 18; Halifax, 19; and Newcastle, 20.

A Theory Concerning the Antagonism of Malaria and Phthisis.—Mr. Emerson E. Hasty, of Richards, O., sends us the following concerning the relations of malaria to pulmonary tuberculosis, saying that, although he is not a physician, he nevertheless considers it a duty to the world to suggest his theory on the subject. He writes as follows, explaining that, although the language of direct assertion is used in order to avoid needless verbiage, positiveness is by no means intended: "Malaria is the prevalence of organic germs in air, water, and food. These germs, if not checked in their development and multiplication, would speedily destroy all the higher forms of life. Nature secretes a poison expressly to combat these microscopic germs, to wit, the bile. The assistance which bile affords in digestion is merely incidental to its great mission of defending the body from destruction by animalculæ and fungi. The germs of these growths in the blood greatly stimulate the production of bile; their disappearance causes the production of bile to decline. As organic germs are rampant in summer and autumn, it comes about, in consequence, that people are bilious at that time of the year. Another phenomenon of malarious regions is disease of the liver. Beasts suffer as well as men. In such climates the livers of slaughtered beasts are very frequently so ulcerated as to be unfit for food. Why is this? The special demand for bile, instead of being confined to a few weeks in autumn, is so spread over the year that the liver is overtaxed, and becomes diseased. Now, as to the influence of malaria on consumption. Consumption is caused by the ravages of a microscopic bacillus that inhabits the lungs. As this organism does not circulate in the blood, the production of bile is not stimulated by it. *Therefore the system never becomes sufficiently impregnated with bile to destroy the bacillus of consumption, except when malarial germs in the blood stimulate secretion.* Here is the point where medicine should seek to force an entrance. Secure the impregnation of the whole system, or at least of the lungs, with bile. If the natural supply is inadequate, or unadvisable, cannot the gall of animals be used? And would not rubbing it into the pores of the skin, over the chest, be better than introducing it into the stomach? Man has already learned to destroy insects by means of poisonous soaps; and it is interesting to observe that bile is chemically a soap. It is a soap of soda and taurocholic acid, glycocholic acid assisting more or less. Common soap is potash with oleic acid, various other fatty acids assisting more or less. As a striking evidence that bile is meant for a poison, not quite all living creatures have soda for the alkaline base of the bile. All terrestrial creatures do, and all creatures living in fresh water; but in the ocean all living creatures, even the microscopic ones, must be inured to soda, because soda is so very abundant in sea-water. Soda will not poison denizens of the ocean; accordingly, we find that the bile of ocean fishes has potash for its base."

Medical Advice in the Daily Press.—The Chicago correspondent of the Philadelphia *Medical Times* writes that early in August one of the daily papers came out with a sure cure for diphtheria. The "cure" was spirits of turpentine, and the dose prescribed by the editor was a tablespoonful for adults, and a teaspoonful for children, frequently repeated. This criminal advice resulted in more than one narrow escape from death.

A Chinese Prescription.—A correspondent of the *Columbus Medical Journal* gives the following as the translation of a prescription which was written by a Chinese doctor for a man who had applied to him with chronic dysentery:

℞. Powdered gentian.
" catnip leaves.
" root of taraxicum.
" root of white ginger.
" smilax.
" black pepper.
" root of persimmon tree.

Of each, quantity sufficient to half fill a wine-glass.

Powdered rhubarb.
" digitalis.
Calomel.

Of each as much as can be held between the thumb and forefinger.

Three inches of umbilical cord, powdered.

One snake's skin, powdered.

One cat's head, fresh if possible.

Sig.: Boil all these in five quarts of water for three hours; cover the patient with many quilts, and cause him to drink all the medicine within thirty-six hours, as hot as it can be swallowed.

Mr. Sampson Gamgee, the distinguished Birmingham surgeon, died on September 17th, in his fifty-ninth year.

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HOW NEW YORK HAS REGULATED BY STATUTES THE PRACTICE OF PHYSIC AND SURGERY.

BY W. A. PURRINGTON, ESQ.,

NEW YORK.

THE subtle charm of platitude, so dear to the Philistine heart, would have been lost to Davy Crockett's adage, and, probably, the adage itself would have been lost consequently to us, had that worthy left out his Tupperism and simply said, "Go ahead!" The preliminary, "Be sure you are right," was what lawyers call surplusage, a tub to the whale. As a general rule, men who go ahead with much vigor are cock-sure—and that is the zenith of assurance—of their own righteousness. This is fortunate; were it otherwise, chaplains in war time would have to resign. As doubt of the righteousness of one's course of conduct increases, vigor of action declines. While Pilate and Hamlet waste precious time weighing *pros* and *cons*, the high priest and wicked uncle move decidedly onward with no more compunctions of conscience than had Crockett himself when he died in the *Alamo*, like a magnificent free-lance, aiding the brave Neo-Texans to overturn the lawful authority of Mexico, as not suited to their Caucasian taste. Now, if it be true that the average man does not go ahead unless he considers his objective point a proper one, it is clear that Crockett would have made a better work-a-day rule if, instead of exhorting us to be sure we are good, he had urged the need of getting a clear idea of what is wanted and attainable before setting out on any course of action.

If legislatures were as wise in fact as they are in the theory of democratic government, we, in addressing them, might imitate with safety the quaint and pious fashion of Presbyterian conventicles; in which one often hears the pastor, after praying for all good things in a general way, ask the congregation to amend his petition by singing the stave:

> "Not what we ask, but what we need
> Do thou, O Lord, supply."

And, in fact, laws are constantly passed at the instance of persons who, knowing in a general fashion that they want something—reform, for instance—have devoted little study either to the best method of enacting their desire into law, or to the limits within which the best results are obtainable. They plant melons in loam, and grain in sandy soil. And, inasmuch as legislatures do not know what we have need of before we ask it, the necessity is great that we ourselves should have clear notions of what we want before petitioning them.

It is not purposed here, therefore, to argue the ethical right of the State to regulate within her borders the practice of physic, the law, or any other profession or craft; the legal right so to do is established. Nor is it the object of this paper to discuss the mooted question of how far it is wise and politic to exercise that legal right; on the contrary, for the purpose of our present discussion, the wisdom and policy of exercising it to some degree are assumed. But it is the object of this writing to clarify and make definite our ideas of what is desirable in a law restricting the practice of physic and surgery, by an examination of what has been done in that regard by the Colony and State of New York, and of the condition of the present laws of the State on that subject.

For one hundred and twenty-six years the majority of the legislators of this body politic have considered it for the best interest of the citizen that men uninstructed in medical science should not tamper as physicians with life and limb. The efforts to stop such tampering within this jurisdiction have made a mess of the statute book. This is not surprising. A good statute, like a good man, is a growth, a result of development and experience. In one respect legislatures are like fond mothers who can never find heart to throw aside their boys' small clothes. But here the resemblance ceases, for the mother keeps the little garments for her own delectation only. She does not insist that her man-child of twenty-one shall stroll down the avenue rigged out in the pantalettes of infancy, nor does she keep his bibs and tuckers with his shirts. But the Legislature does something very like this when it keeps outgrown law on the statute-book. The lazy phrase, "All Acts inconsistent with this Act are hereby repealed," is a preservation of statutory bibs that renders it necessary to turn on the light and make careful search of the legislative chiffonier to make sure we have a fitting garment of law.

Very fortunately, the medical profession in our commonwealth was born a lusty infant and a single birth. It was not twins, or triplets, or any such mistake of fertility, but came into the world large-bodied and of long limb under the form of the general practitioner. We have been free from the complications that arose in England from the separation of those practising healing into classes accordingly as they treated the inner or outer man, and sold remedies or simply prescribed them. The straitened circumstances of a young community required the medical man to cut, bandage, and cauterize, as well as prescribe boluses and the nauseous draughts on which the colonists throve; he carried his own medicines, cups, and leeches; and his universal name was "doctor." It is true that the statutes place the disjunctive "or" between physic and surgery; but this has been done, not to disjoin what Galen joined, but rather to comprehend all manner of healing within the legal mesh. Our law has known until lately but two classes of medical practitioners: (1) Those who, by complying with its requirements as to age, study of medicine, examination, and record, have become licensed to practise physic and surgery; (2) those who, by failing in such compliance, have constituted the class of unlicensed practitioners. The schisms of homœopathy, hydropathy, electropathy, eclecticism, Perkinism, and many other 'pathies and 'isms which from time to time have arisen to benefit or bamboozle, or benefit by bamboozling, patient, suffering, and credulous man, have all been winked at by the eye of the law whenever their followers could show compliance with the prescribed term of study, etc.[1] We have said that until lately only these two classes of physicians and surgeons were known to the law; but within the last ten years a body of men, whose business it is to treat a particular region of the human body, have been incorporated on the model of the medical societies, although, in so far as they claim to constitute a profession they

[1] "The law has nothing to do with the merits of particular systems. Their relative merit may become the subject of inquiry when the skill or ability of a practitioner, in any given case, is to be passed on as a matter of fact. But the law does not, and cannot, supply any positive rules for the interpretation of medical science." Corsi v. Maretzek, 4 E. D. Smith, 1.

can differentiate themselves from other ministers to human infirmity, not by their method of treating the ailments of man but by the part of his body they treat. They are the men who laugh in our teeth if in pain we go to them for aid. They are dentists, and call themselves oral surgeons. Granting their associations all respect due to the undoubted talent, skill, and acquirements of their members, it is nevertheless glossologically undeniable that only in so far as they deserve the name of "tooth-carpenters" do the dentists form a class apart; in other words, it is only as mechanics, pullers, fillers, and, if one may so speak, falsifiers of teeth, that they are entitled to classification as a distinct body of workers. Plumbers, carpenters, ivory-workers, and dentists, in so far as they are a sub-species of the group last named, constitute respectively separate classes of artisans, differentiated *inter se* by the matter upon which their manual labor is performed and the method and object of their work. So chiropodists, manicures, and barbers, while confining themselves to their proper function, constitute distinct classes of manual workers. But when the dentists, ceasing to be mechanics, undertake the treatment of diseases of the mouth, they become practitioners of medicine or surgery, and as such have no more claim to legal recognition as a peculiar profession than have dermatologists, gynecologists, laryngologists, or any of the other 'ologists who fill an ever-increasing space in the ranks of busy life, notwithstanding Mr. Worcester's obstinate refusal to admit them to standing-room in his logical and prejudiced dictionary.

But without further allusion to this new class of quasi-medical men, or any attempt at prophecy [1] regarding their possible evolution, we may come directly to a short study of what the law concerning medical men in general has been and is, in the hope that we may gather some clearer ideas of what it ought to be. And by way of encouragement in our study, it may not be amiss to repeat what the chairman of a legislative committee, to which was referred one of last year's medical bills, said to the writer: "Whenever a bill is brought here that the doctors themselves agree on we will pass it." [2] In colony times, when George II. sat obstinately on his throne for the thirty-third consecutive year, which was the year of grace 1760, upon the tenth day of June the first New York statute regulating the practice of medicine, being Chapter CXCVIII. of that year's laws,[3] was enacted by his honor the Lieutenant-Governor, the Council, and the General Assembly. Its preamble ran thus: "Whereas, many ignorant and unskilful persons in physick and surgery, in order to gain a subsistence, do take upon themselves to administer physick, and practise surgery in the City of New York, to the endangering of the lives and limbs of their patients; and many poor and ignorant persons inhabiting the said city, who have been persuaded to become their patients, have been great sufferers thereby. For preventing such abuses for the future—Be it enacted," etc. The Act then went on to provide that no one should practise as a physician or surgeon in said city, unless first examined in physic and surgery, and approved and admitted by one of His Majesty's Council, the Judges of the Supreme Court, the King's Attorney-General, and the Mayor of the city for the time being, or any three of them, calling to their aid in making such examination such proper person, or persons, as they in their discretion should think fit. A testimonial, in a form prescribed by the statute, was given to a successful candidate, and the penalty for practising without such authorization was £5 for each offence, one-half thereof for the use of anyone suing for the same, and the other moiety to the churchwardens and vestrymen of the city for the use of the poor. Exemptions were made of persons in practice before the publication of the Act, and persons bearing His Majesty's commission and in his service as physicians or surgeons. It will be noticed that no attempt is made in this statute to determine the range of examination or prescribe the term of study.

On March 27, 1792, another similar act [1] was passed, reciting in its preamble that "many ignorant and unskilful persons presume to administer physic and practise surgery within the City and County of New York to the detriment and hazard of the lives and limbs of the citizens thereof," and enacting that after its passage no one should practise physic or surgery within said city before he should have both attended the practice of some reputable physician for two years, if a graduate of a college, or for three years if not a graduate, and been examined, admitted, and approved by the Governor, Chancellor, Judges of the Supreme Court, Attorney-General, Mayor, and Recorder, or any two of them, taking to their aid three respectable physicians with whom the candidate had not "lived to acquire medical information." In addition to the penalty of £7 for practising without a testimonial of qualification, payable, half to the person suing for it and half to the use of the poor, it was also provided that no person so practising could bring an action to recover for services or medicines. Persons practising before the passage of the Act, persons rendering gratuitous aid in emergencies, practitioners of neighboring States or counties called in to consultation on a particular case, and persons having the degree of doctor of medicine from any college or university of the United States having authority to confer it, were all exempt from the provisions of the Act. The operation of this law was greatly limited by a provision that, before anyone became subject to its penalties, complaint must have been made of him in writing by three reputable citizens to the Mayor or Recorder, who, if he deemed it expedient, after inquiry, should notify the accused practitioner, whereupon he should "remain, with respect to his after-practice, exposed to the penalties of this Act," until he should obtain a proper testimonial as provided for in the statute. The recognition of diplomas as licenses, the exemption of consulting physicians, and persons giving aid in emergency, and the provision as to notice, were all new.

The foregoing statutes were local, affecting only the City and County of New York.

The first general law for the State was enacted on March 23, 1797.[2] It had no preamble, but, plunging *in medias res*, enacted that after the first day of October next following, no person practising physic or surgery at the time of the passage of the Act should *continue* to so practise without satisfactory proof to the Chancellor, a judge of the Supreme Court, a master in chancery, or a judge of the Court of Common Pleas, that he had practised for two years next preceding October 1st aforesaid, or had studied that time with a reputable physician or surgeon, and had filed a certificate to that effect with the County Clerk. The Act further provided that no other person should practise physic or surgery, without a certificate from one or more physicians or surgeons that he had studied medicine for four years under the preceptors signing the same, and that he was qualified to practise. The subscribers verified their certificate by oath before a magistrate, who endorsed on it permission to practise, and it was then filed with the County Clerk.

A penalty of $25, payable, half to the complainant and half to the county, was provided for persons practising without authority as aforesaid. The term of study for college graduates was made only three years. Diplomas were still recognized, but became licenses only

[1] Since this article was written, Dr. Harding, of the Kickapoo Indian Combination, being on trial at Special Sessions for unlawfully practising physic, by making diagnosis of a skin eruption as eczema and prescribing therefor, defended on the ground that being a registered dentist he was entitled to prescribe for any part of the body in which he considered the cause of an oral disease to lie, *e.g.*, "to give a liver pill if the trouble arose from the liver," thus furnishing illustration of a position taken above. But the court found him guilty.

[2] Unconsciously he was echoing what Lord Palmerston said prior to the passage of the Medical Act in 1858. Three bills were then before Parliament for the better regulation of the practice of medicine; the same number as were before the Legislature of 1886. After hearing all parties in interest his Lordship dismissed them, we are told, "with the comforting assurance that so soon as the different sections of the profession will concur in the adoption of a plan of reform it shall receive the sanction of the Government." West. Rev., April, 1858.

[3] Livingston and Smith, p. 188.

[1] 2 Greenleaf, chap. xxviii., p. 425.

[2] 3 Greenleaf, chap. xlv., p. 265.

on being filed with the County Clerk. Students were allowed to practise under the immediate supervision of preceptors. Residents of another State might practise in New York on a particular occasion, at the special request of a practitioner qualified under the Act. Counterfeiting the certificate intended by the Act was punishable by a fine of $100 and the forfeiture of the right to practise. Gratuitous practice in emergency was still allowed. New features of the Act were its application to persons in practice at the time of its passage, the provisions for filing certificates and diplomas with the County Clerk, the permission to students to practise, and the punishment of counterfeiting certificates. The Act abolished the provision as to notice which by excessive formality destroyed the vigor of the Act of 1792.

In the revision of 1801 this Act was substantially re-enacted,[1] with some verbal modifications. The principal new matter was a provision that no person removing to this from another State should practise more than three months next following his removal, without qualifying under the State law.

In 1806 was passed the first Act authorizing the incorporation of medical societies,[2] with this preamble: "Whereas, well-regulated medical societies have been found to contribute to the diffusion of true science, and particularly the knowledge of the healing art, Therefore, Be it enacted," etc. This Act empowered the medical societies to examine, by their censors, medical students and confer diplomas, constituting a license to practise physic or surgery, or both, within this State. It further provided: "That from and after the first day of September next, no person shall commence the practice of physic or surgery within any of the counties of this State until he shall have passed an examination and received a diploma from one of the medical societies, to be established as aforesaid; and if any person shall so practise without having obtained a diploma for that purpose, he shall forever thereafter be disqualified from collecting any debt or debts incurred by such practice in any court of this State." Persons coming from another State or country, duly authorized to practise under the laws thereof and having diplomas from regular medical societies, were allowed to practise. The societies were forbidden to examine a student until the production by him of satisfactory testimony that he had studied physic or surgery, or both, as the case might be, "under one or more reputable practitioner or practitioners, for the term of three years." This Act specifically repealed the former Act regulating the practice of physic and surgery in this State.

It will be noticed that the only penalty for practising without license under this law was the inability to collect fees by action at law, and that the provisions of former statutes as to consultants from other States, gratuitous aid in emergency, counterfeiting diplomas, filing diplomas from other States with the County Clerk, and the practice of students under their preceptors' supervision, have been all omitted.

In the following year, 1807, this Act was amended,[3] and by the fifth paragraph of the Amending Act it was clumsily provided, "That if any person, not authorized to practise physic or surgery at the time of the passing of the Act hereby amended, or if any person since the passing of said Act shall have commenced the practice of physic or surgery, without being legally authorized, every person who shall so continue to practise unauthorized shall forfeit and pay the sum of $5 for every month such unauthorized practice is continued." If this provision is nothing else, it is what our old camp-cook used to call "langwidge." Like the ballad of the Jabberwock, it is not very clear, but it fills us with ideas. The rude forefather who conceived the Act went on to derange his parts of speech in this fashion: "Provided, that the penalty to be incurred by the preceding section of this Act shall not be considered to extend to any apothecary or to any person administering medicine who does not follow the same as a profession, nor shall any prosecution be commenced by virtue of said section unless it shall be within thirty days after the penalty incurred, nor shall a second prosecution be commenced or recovery be had in less than thirty days from the date of the first recovery; and provided, further, that nothing in this Act contained shall be construed to debar any person from using or applying for the benefit of any sick person, any roots or herbs the growth or produce of the United States." It would be a waste of words to point out the delightful humor of this legislative squib, in which such violence is offered to the poor mother tongue as she rarely suffers even in statutes. The "botanic" practitioner who framed it has handed down his grammar to his eclectic successors. He was own kin to the legal gentleman who, being called on to take the verification of an affidavit made "on the 1st day of April, A.D. 1850," affixed his jurat in this form, "Sworn to before me this said first day of April in the year of the aforesaid Lord 1850."

In the revision of 1813 the Act incorporating the medical societies was embraced,[1] but the revised law contained a bare provision empowering the societies to examine and license students.[2] No penalties were prescribed for practising without authority.

In 1827 the present Revised Statutes of the State were enacted, and in their notes the revisers set forth their reasons for making those provisions as to the practice of medicine which, as slightly modified by subsequent acts,[3] continued to be the controlling statutes down to 1880. It was clearly the intent of the framers of the law to forbid the practice of physic and surgery to anyone not a member of a county society, and not only to regulate the licensing of practitioners, but to provide for the good behavior of licentiates by prescribing a legal method of expelling members of county societies and forfeiting their right to practise medicine for "gross ignorance or misconduct in his profession or immoral conduct or habits."[4]

Title 7 of Chapter XIV. of Part I. of the Revised Statutes treats of the regulation of the practice of physic and surgery in this State. The first two sections of the title, which have never been expressly repealed and appear to be, *mutatis mutandis*, in force to-day, provide that every physician or surgeon shall join the county society of the county in which he practises, under penalty of forfeiting his license. The next four sections provide that upon proper cause shown by a county society the courts may declare a member of such a society expelled for gross ignorance, misconduct, or immorality, and his license forfeited.[5] The next twelve sections (8 to 20) regulate the licensing of medical men and provide (1) that no one shall be examined for a license who shall not have studied under a licensed physician or surgeon four years, or three years in the case of one, who after the age of sixteen, shall have pursued either the course of study usually followed in colleges of this State, or a complete course of all the lectures in an incorporated medical college; (2) that the regents' degree of M.D. should be conferred only on persons having studied three years under a preceptor and attended two complete courses of all lectures delivered in an incorporated medical college; (3) that no

[1] 1 Kent and Radcliffe, p. 449. [2] Laws of 1807, ch. 104. [3] Laws of 1806, ch. 138.

[1] Laws of 1813, ch. 94. [2] §§ 9, 10, 18.

[3] Laws of 1830, ch. 126; 1836, ch. 126; 1844, ch. 275; 1872, ch. 746; 1874, ch. 436, and various charters making the degree of M.D. from certain colleges a license to practise.

[4] "Under the present law, the county societies have the right of expelling their members; but it does not appear, unless by implication from the seventh section of the Act of April 20, 1818, that such expulsion draws after it any loss of the professional privileges of the member expelled. It is certainly desirable, and seems to have been the intention of the Legislature, that the county societies should possess an effectual control over the conduct of the physicians in their respective counties; but to render such control effectual, the provisions proposed, or others similar in their effects, are believed to be indispensable. The members of the other learned professions may, by summary proceedings, be suspended or permanently degraded from their professional privileges, and the community have surely an equal interest in preventing the injuries that may result from the ignorance, or vices, of unskilful or unworthy physicians." Notes R. S., 2d ed., vol. iii., p. 527.

[5] This did not deprive a society of its common-law right to expel for abuse of franchise, *e.g.*, by refusal to pay dues.

person should practise medicine unless he (*a*) had a license or diploma from an incorporated medical society of the State, or (*b*) had the degree of M.D. from the university, or (*c*), being authorized to practise in another State or country and having a license or diploma from a medical college or society in such State or country, should file a copy of his license or diploma with the County Clerk and give the "*medical society of the county*"[1] satisfactory proof of having followed the plan of study prescribed for students in this State. There were also minor provisions relative to matters of record and second examinations. It was further provided that no one under legal age should practise,[2] that the degree of M.D. should not constitute a license to practise,[3] and that an unlicensed practitioner should not recover his fees at law, but should be guilty of a misdemeanor in so practising, punishable with fine or imprisonment in the discretion of the court.[4]

In 1830[5] the penal clause of the Revision (§ 22) was repealed, and in lieu thereof a penalty of $25 was prescribed against unlicensed practitioners, with the exception of any person "using or applying, for the benefit of any sick person, any roots, barks, or herbs, the growth or produce of the United States."

In 1836 it was provided by an amendment of § 17 of the Revision that the censors of the *State Society* should examine and license persons coming from without the State.[6]

In 1841[7] the last-mentioned Act was amended so as to provide that persons coming from another country should be examined by the censors of the State Society, while a person from another State should file a copy of his diploma with the County Clerk and exhibit satisfactory proof of his qualifications to the County Society.

In 1844[8] was passed an Act of which Judge Beardsley said, "Since the passage of the Act of 1844 quackery may certainly boast its triumphant and complete establishment by law."[9] In a very recent prosecution, conducted by the Medical Society of the County of New York, defendant's counsel argued very disingenuously to a jury, to whom the question of law was allowed to go, that the effect of this Act was to abolish the distinction between licensed and unlicensed practitioners. This is manifestly untrue, for the Act itself clearly maintains that distinction. It abolished all statutory provisions forbidding anyone from recovering fees for medical services rendered the sick, and provided that *unlicensed physicians* should be held to the same rule of the measure of damages in civil suits as *licensed physicians*, and that it should be a misdemeanor to *practise without a license* in case of gross ignorance, malpractice, or immoral conduct; such misdemeanor to be punished by a fine of [from fifty to one thousand dollars, or imprisonment from one to twelve months, or both. During the last session of the Legislature an effort was made to re-enact this law, and petitions containing many false statements were circulated in its favor.

Perhaps the most curious argument made in its behalf was the assertion by its friends, in their printed petition, that certain persons are born with peculiar gifts of healing, that these gifts are not recognized as entitling their possessor to a diploma, and that experience has shown that a *regular course of medical instruction does not increase, but does, on the contrary, materially diminish the mysterious innate powers*, among which we may fairly presume Voudoo is included.

The law of 1844 was undoubtedly specious. As a general principle, it is true that every man ought to be allowed to follow any calling he may choose, with no other responsibility than a liability for the consequences of his acts. But the reason of this is plain; it is generally easy to trace the effect of what is done by a person following an ordinary vocation. If a house falls because of defective building we can analyze the mortar, test the woodwork, examine the brick. If a lawyer misconducts a cause he works in the open and his errors are, for the most part, of record. But who shall tell in a given case of disease the precise cause of death or recovery? Dr. Perkins applies his metallic tractors, and the age of miracles comes again; Hahneman prescribes a dose of nomenclature, and the sick walk. Who is to say that *post hoc* is not in a particular case *propter hoc*, or *vice versa?* And what is to be the standard of knowledge and practice?[1] It is for the very reason that we have no certain test of the results of their treatment in the majority of cases that we fairly may exact by law of physicians a certain degree of study of our human economy.

With the exception of special college charters making the degree of M.D. a license, the general Act for incorporating medical colleges, and the indirect modification of the licensing laws resulting from the incorporation of homœopathic and eclectic State and county societies as new sources of license, no further legislation regulating the qualifications of practitioners of medicine was had until 1872. In that year was passed the Act, still in force, creating what are known as the Regents' Boards:[2] providing for the appointment by the regents of the university of one or more boards of examiners, each composed of seven licentiates in physic and surgery, with power to examine any person twenty-one or more years old, of good moral character, with a competent knowledge, in the chancellor's opinion, of the branches of learning taught in the common schools of the State and of the Latin language; such person having also studied medicine three years under the preceptorship of a licensed practitioner, or having been licensed after examination by a medical school or college. The law directs the regents to confer the degree of doctor of medicine of the University of the State of New York, constituting a license to practise, upon every candidate recommended by five members of the examining board. The Revised Statutes, as we have seen, recognized the degree of M.D. from the university as a license; the effect of this law, therefore, was not to increase the sources of license but to regulate one of them.

In 1874[3] was enacted one of the clumsiest, most inept, acts that has ever disfigured our statute-books. Its first section requires "every practitioner of medicine or surgery in this State, excepting licentiates or graduates of some medical society or chartered school, to obtain a certificate from the censors of some one of the several medical societies of this State, either from the county, *district*, or State society," showing that the person to whom it was issued is qualified to practise the branches of medicine enumerated in it, and to record the same with the County Clerk. Here we have intimation of new sources of licenses, district societies, whatever they may be, and extra-State societies. The second section requires the censors of "each medical society aforesaid" to notify "all practitioners" of the requirements of the act, and request them to comply with the law. By the dexterous use of the word "aforesaid" the framer of this act plunges us in doubt as to whether, after all, the first section intended to make extra-State societies sources of license; for the direction to censors to give notice of the law is clearly applicable only to officers of societies within the State. Passing to the third and last section we are surprised to find an entirely new source of license pop up, like jack-in-the-box, viz., State boards of medical examiners. It is therein "declared to be a misdemeanor for any person to practise medicine or surgery in

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[1] This made them in effect licentiates of the society. [2] § 20.
[3] §§ 17, 18, 21. [4] § 22. [5] Laws of 1830, ch. 126.
[6] Laws of 1836, ch. 532, § 2.
[7] Laws of 1841, ch. 64. This act is omitted from the compilation made for the State Society in 1880.
[8] Laws of 1844, ch. 275. [9] Bailey vs. Mogg, 4 Denio, 60.

[1] Courts have held that a practitioner is only to be held liable for skill and knowledge in the particular system he professes to follow. A disciple of the "botanic school" is not held to the same standard as a regular physician [Bowman vs. Woods, 1 Greene (Iowa), 441]. In Smith vs. Lane, 24 Hun. 632, the Supreme Court of New York held that to pretend to cure disease without instruments or physic was not practice of medicine.
[2] Laws of 1872, ch. 746. [3] Laws of 1874, ch. 436.

this State unless authorized so to do by a license or diploma from some chartered school, State board of medical examiners, or medical society," or to practise under a diploma unlawfully obtained. The effort to enforce this wretched law is said to have resulted in the open bidding of disreputable societies for the fees of candidates plucked by more respectable bodies. A callow youth, once standing on General Grant's piazza, asked his host what were the good points of a horse. "Do you see that pretty horse coming down from the stable?" said the General. "Yes," answered the lad. "Well, study him," the General replied, in his dry way; "he hasn't a single good point." That about describes chapter 436 of the laws of 1874. It is a model of what a law should not be; and, nevertheless, the compiler of the Penal Code accepting it as stating existing law on its subject, cast its third section into section 356 of the Penal Code, and, having framed that section prior to the passage of the law of 1880, absolutely neglected to modify the Code to conform to the newer and better law; thereby he introduced into the statutes some of the confusion the Code ostentatiously purposed doing away with.

In 1880 the present registration law[1] was enacted. It provides that all persons lawfully practising physic or surgery in this State shall register with the clerk of the county in which they practise, or intend to practise, their authority for so doing;[2] that no person not licensed prior to its taking effect shall practise except by authority of a diploma from an incorporated medical school or college, which diploma, if granted by an extra-State institution, shall be indorsed by such a school or college within the State. An effort to make false swearing to the facts in the affidavit of registration punishable as perjury, was defeated by the unfortunate phraseology of the law, which is applicable in this regard only to persons duly qualified, and who have therefore no inducement to swear falsely. Practice of medicine without license, or under cover of a diploma fraudulently obtained,[3] is declared a misdemeanor, punishable on conviction of a first offence by a fine of from fifty to one hundred dollars, and on conviction of a second offence by a fine of from one hundred to five hundred dollars, or imprisonment for from thirty to ninety days, or by both fine and imprisonment. Persons licensed to practise before the taking effect of the act are guilty of a misdemeanor in practising without registration, but for persons licensed under the act registration is one element of the license, *i.e.*, a diploma is not a license until registered. Commissioned medical officers of the United States Army, Navy, or Marine Hospital service, are exempt from the application of the act. In 1884[4] an amendment was made to this law of 1880, whereby practitioners of medicine living in other States near the border of this may practise in the State of New York, if their regular practice is partly within our limits, provided they are licentiates in their own State. But they may not open offices or appoint places to meet patients in this State. As we have already pointed out, the Penal Code, which, though drafted before, took effect after the enactment of the laws of 1880, has accepted as its 356th section the third section of the law of 1874; this third section, and also section 2, ch. 126, laws 1830, and section 5, ch. 275, laws 1884, were repealed by the last Legislature in an act[5] intended to definitely remove from the statue-book all acts repealed by the Penal Code as inconsistent therewith. As the law of 1880 is not mentioned in this repealing act, it is to be presumed that the framers[6] of the latter do not regard it as inconsistent with, or repealed by, the Penal Code,[1] but as forming, with the Code, a consistent statute. What, then, is the effect of all this legislation? Briefly it is this. Every one of these statutes not specifically repealed is in force to-day, except in so far as the repeal of an earlier statute is worked by its absolute inconsistency with a later one. It may be fairly argued that the eight sections of the Revised Statutes empowering county societies to institute proceedings against their own members with a view to expelling them, and forfeiting their licenses, are still in force; that the only persons licensed to practise prior to 1874 were the licentiates of the incorporated medical societies of the State and counties, and doctors of medicine with diplomas made licenses by the charters of the college conferring them. From 1874 to 1880 licentiates were persons with licenses or diplomas from "some chartered school, State Board of Medical Examiners, or Medical Society." Since 1880 duly qualified practitioners have been either those licensed as aforesaid, prior to the taking effect of the registration law of that year, or those licensed under that law, viz., those holding diplomas from incorporated medical schools of this State, or diplomas of foreign incorporated medical schools endorsed by such a school within the State.

Space does not permit more than a suggestion of what is needed to reform this jumble of law. First of all, every penal statute should be clear and definite. One law should be substituted for all now on the statute-book relative to the licensing of medical men, and every other act *in pari materia* should be specifically repealed by title and section. Provision should be made to stop the trade in diplomas, which, under our present law, are publicly advertised for sale in the columns of the daily press. False swearing under the law should be made perjury; counterfeiting diplomas should be made forgery; conviction of felony should work forfeiture of license; and civil actions against unlicensed practitioners, to recover fees paid to them, should be given to patients. Adequate regulations should be made as to aid in emergency and peripatetic nostrum-vendors. All these points were embodied in a bill that passed the Assembly of 1884–85, and the Senate of 1885–86. Either bill, if presented earlier in the session, would have passed. They failed because the early part of each session was lost in trying to get through the Medical Examiners Bill, a hopeless task, on account of the conflict of irreconcilable interests. If such a bill is carried to Albany early in January, 1887, there is every reason to believe it will become law. The fixing of a higher and more uniform standard of medical education might be better attempted in a separate act, which might also provide for the punishment by legal process of licentiates guilty of unprofessional conduct.

LACTIC ACID IN LARYNGEAL PHTHISIS.—Dr. Theodore Hering, of Warsaw, has recently published a memoir with this title, in which he relates his experiences with this remedy. He treated thirty-two cases of tubercular ulcerations of the vocal cords with lactic acid, and of these, four were completely cured, two were nearly so, four were much improved, and in six the ulcerations were not healed, but phonation was restored and the dysphagia was relieved. He uses a twenty to thirty per cent. solution, applied by means of a pledget of absorbent cotton, and preceded in certain cases by an application of cocaine. When greater tolerance is established, he employs an eighty per cent. solution of the pure acid, and the applications are continued until the eschar falls off. Such good results in so intractable an affection would seem to warrant a further trial of lactic acid.

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[1] Laws of 1880, ch. 513.

[2] The intent of the Act was to make it a misdemeanor to practise without having registered lawful authority. The phraseology apparently creates two distinct offences: (1) practice without authority; (2) neglect to register. It has been held on demurrer recently that two counts of an indictment, one stating practice without authority, the other stating failure to register, do not state separate offences. Nevertheless, on trial the people were directed to elect on which count they would proceed. This is a most annoying dilemma at times.

[3] The court, in the case of The People *vs.* Kahn, expressed the opinion that a diploma bought of a college was sufficient license.

[4] Laws of 1884, ch. 411.

[5] Laws of 1886, ch. 593.

[6] The act, it is understood, was prepared under the direction of the Attorney-General on the request of the Legislature.

[1] This supports the contention of the Medical Society of the County of New York, and the ruling of Judge Gildersleeve on Fulda's demurrer.

A LIGATION OF THE COMMON ILIAC ARTERY FOR ANEURISM OF THE EXTERNAL ILIAC — DEATH ON THE SEVENTH DAY FROM ACUTE NEPHRITIS.

By WILLIAM F. FLUHRER, M.D.,

VISITING SURGEON TO MT. SINAI AND BELLEVUE HOSPITALS, NEW YORK.

H. T——, colored, a laborer, aged thirty-five, sent to me for an operation for an aneurism of the external iliac artery by Dr. F. M. Purroy, was admitted into Mt. Sinai Hospital May 3, 1886. Several years before admission into the hospital the patient had rheumatism. Four years ago he had a chancre, followed by a bubo in the left groin; later he had sore throat and pains along the shins, which were cured by the persistent treatment with iodide of potassium.

In September, 1885, the patient observed that the left lower limb and groin became somewhat suddenly swollen. Once the swelling in the groin was so great that he could hardly flex his thigh; on another occasion, after walking, he was obliged to cut off his boot on account of the great swelling of the leg and foot. Since September till the time of admission the swelling has diminished, but has never disappeared. After walking it was most noticeable at the upper part of the thigh and in the groin, but after a night's rest most marked about the ankle. Coincident with the appearance of the swelling there was pain in the limb. It was transitory, piercing, frequent about the knee, and aggravated by working.

Ten weeks before admission the patient noticed a small pulsating tumor deeply seated in the left groin. This tumor has steadily increased in size and the strength of its pulsations.

The patient has lost about twenty pounds in weight, but thinks his strength is as good as ever. He is in a fair condition of muscular development. His hands are always cold. The walls of the radial arteries are thickened. Under close observation he appears to be only fairly vigorous.

Upon examination the tumor in the left groin is scarcely visible, but by a light touch a fulness there is easily felt. A more decided palpation discovers a tumor apparently two-thirds the size of my clenched fist, and of the same irregular shape. It extends upward from Poupart's ligament to a point midway between the upper border of the pubes and the umbilicus, its upper boundary corresponding to the place of bifurcation of the common iliac artery. The lower portion of the tumor extends inward to within half an inch of the median line. Its pulsation is expansile and accompanied by a faint systolic bruit. The beat of the left femoral artery lags behind that of the right side and is weaker. It is difficult to control the pulsations of the aneurism by compression of the aorta. The circulation is good in the limb supplied by the diseased vessel. No enlarged veins or glands are visible. No tumor can be felt on rectal examination. After the patient had been much of his time in bed there was little swelling of the limb, it being only seven centimetres larger at the upper part of the thigh than its healthy fellow.

An examination of the viscera showed no departure from a healthy condition. The urine was of 1.020 specific gravity, and upon chemical and microscopical examination presented no abnormal features.

Upon consultation with my colleagues the diagnosis of aneurism involving the whole extent of the external iliac artery was concurred in, with slight reservations of opinion in favor of the existence of a malignant tumor.

Upon his admission the patient was given fifteen grains of iodide of potassium three times daily, but this treatment was soon stopped, and instead there was given, in addition to generous diet, a tonic of five grains of citrate of iron and quinine three times daily. He spent much of his time in bed, but in pleasant weather walked in the yard of the hospital.

Upon the morning of the day of the operation his urine was carefully examined and found to be normal.

In operating I proposed to open the abdomen, resolve any slight doubt as to the nature of the tumor, and, through an opening in the posterior layer of the peritoneum, tie the vessel.

Previous to the day of the operation his skin was thoroughly cleansed by baths and his bowels were freely moved by castor-oil. Every detail that would render the operative approach to the abdominal cavity antiseptic, and thereafter maintain the asepticity of the wound, was carefully attended to. After a thorough scrubbing with soap and water the skin of the abdomen was disinfected with towels wet with a one to thirty watery solution of carbolic acid, which were so arranged that, by the removal of a single towel, the antiseptically isolated field of operation, a strip two and a half by nine inches, could be exposed. The whole left lower limb was wrapped in a thick layer of cotton batting. An incision five and a half inches long was made in the median line skirting the umbilicus, from a point two inches above the upper border of the pubes to a point one and a half inch above the centre of the umbilicus. Subsequently this incision was extended upward half an inch. All bleeding vessels were tied and the peritoneal cavity was opened in the part of the incision below the umbilicus. As soon as the abdomen was opened the boro-salicylic acid solution was substituted for the bichloride of mercury solution that had been hitherto used. The hand washed in the former solution was introduced into the peritoneal cavity, and the diagnosis of aneurism, involving the whole extent of the external iliac artery, was established. The internal iliac artery was felt running down into the pelvis along the inner face of the tumor. The wound was then opened its whole length with scissors. Protruding coils of the sigmoid colon, somewhat distended with gas, were held back with a large flat sponge, wrung out of the warm antiseptic solution. A sheet of thin rubber, twenty-seven by thirty-six inches, of about the thickness of that used by dentists for the rubber dam, carefully disinfected, was rapidly spread over the abdomen, in such a way that its main portion was on the right side of the body and its left edge overlapped the median line for about five inches. The sheet was flushed with the warm antiseptic solution, and then cut from the middle of its left edge to a point opposite the middle of the wound. The assistant withdrew his sponge stopping the abdominal wound, and then the small intestines, which were nearly empty, were rapidly drawn from the abdomen through the slit cut in the rubber, and bunched upon the sheet over the right side of the abdomen. The rubber was quickly folded over the intestines, enclosing them as in a bag. By this device radiation of heat was checked; they were kept moist, and being fully under the control of the assistant, were easily held out of the operator's way. To insure warmth towels wrung out of the warm solution were wrapped outside the rubber. A troublesome coil of the sigmoid colon was covered with a thin, moist sponge, and held aside by a broad metallic retractor acting upon the left edge of the abdominal wound. The artery was easily identified, and did not roll under the finger, but was steadied by the tumor. Although a little more difficult of access on account of its greater depth and the mobility of the mesentery, I selected for ligation a place three-fourths of an inch from the tumor and one and a fourth inch from the bifurcation of the aorta. With two pairs of anatomical forceps I tore a clean slit, one-half an inch long, through the peritoneum, directly over the artery. Never letting go with the forceps of one edge of the opening till I had seized the opposite side, I worked my way down through the sheath to the vessel. Still holding with the forceps the tissue at the edge of the opening, and after feeling the artery with the tip of the little finger, I carefully insinuated round the vessel a blunt-pointed aneurism-needle of short curve, carrying a

fine thread of disinfected silk. In gently passing the needle its end was kept close to the vessel. The identity of the vessel was further confirmed by compressing it against the needle as it lay isolated in its curve. The needle was withdrawn, leaving the loop of silk in position, by means of which the heavy silk ligature was passed round the vessel. The ligature had been disinfected by boiling it for two hours in a five per cent. watery solution of carbolic acid. During the operation it had lain in a three per cent. solution of the same acid. The opening of the posterior layer of the peritoneum had caused no bleeding, not even enough to fleck a sponge. The ligature was firmly tied, and its ends, cut short, fell back out of sight.

In about a minute after tying the vessel, Dr. Purroy, who was watching, observed a slowing of the radial pulse of twelve or fifteen beats per minute, accompanied by a marked increase in its volume.

The ligation of the vessel having been accomplished, the intestines were transferred from their artificial peritoneal cavity back to the abdomen, upon the same method as in their reduction after an herniotomy. During the operation they were out of the abdomen about twenty minutes, but they were not exposed to the air more than one minute. The abdominal wound was closed by a continuous catgut suture for the peritoneum, a continuous silk suture for the linea alba, and interrupted silk sutures for the skin.

The line of incision was covered with a narrow strip of thin rubber tissue, over which was dusted iodoform. The wound was further dressed with sublimated gauze and a combined dressing of borated cotton between layers of gauze, which was fastened in place by strips of rubber plaster; the whole was made more secure by a cloth binder.

The patient was completely under the influence of ether for two hours.

He reacted well from the operation. One hour thereafter he was given a hypodermatic injection of ℥x. of Magendie's solution of morphia. At 7 P.M. his pulse was 84; respiration, 20; temperature, 98.8°. He had vomited once; at 11 o'clock he vomited again, and was given another hypodermatic injection of ℥x. of Magendie's solution. His urine was drawn every six hours. He was allowed to eat cracked ice.

May 21st.—The patient slept but little during the night. He complained of pains in the toes of his left foot. The circulation is returning in the three lesser toes. He perspires profusely. To quiet his restlessness hypodermatic injections of Magendie's solution are given every twelve hours. Milk and lime-water are allowed in small quantities. A.M.: pulse, 100; respiration, 17; temperature, 100.5°. P.M.: pulse, 104; respiration, 20; temperature, 100°. The urine is of light amber color, of specific gravity 1.019. It contains five per cent. of albumin, also a large number of hyaline casts, and some blood-corpuscles.

May 22d.—The patient slept at intervals during the night. He has no pain and feels cheerful. He passed twenty-nine and a half ounces of urine in the last twenty-four hours. He perspires freely. Restlessness is quieted by hypodermatic injections of Magendie's solution every twelve hours. He is encouraged to drink freely of water as well as milk. A.M.: pulse, 108; respiration, 17; temperature, 108°. P.M.: pulse, 112; respiration, 20; temperature, 101.4°.

May 23d.—The patient slept only four hours during the night. He still perspires freely and feels well and hopeful. He is very thirsty, and is urged to drink water freely. The circulation is good in the foot and toes. The dorsalis pedis pulse can be felt on the side of ligation. A.M.: pulse, 112; respiration, 20; temperature, 101.4°. P.M.: pulse, 128; respiration, 22; temperature, 102°.

In the evening the patient was restless, but was calmed by a hypodermatic injection of ℥viij. of Magendie's solution, after which he slept three hours. He has passed twenty-five and a half ounces of urine in the twenty-four hours, of 1.026 specific gravity, heavily charged with albumin and containing a great number of hyaline casts and some blood-corpuscles.

May 24th.—The patient slept about eight hours during the night. In the past twenty-four hours he has taken thirty-six ounces of milk and some whiskey. He has passed only eighteen ounces of urine, which contained the same quantity of albumin and hyaline casts. His pulse is weaker and more frequent, ranging from 124 to 140. His temperature is 102.6°.

The wound is dressed. The abdomen is flat. The incision has united throughout its whole extent by first intention. The aneurism is hard and pulseless. There is no formation of pus, and only a slight bloody staining of the deepest dressings. In the favorable appearance of the wound there is nothing to be desired, but the general condition of the patient is very unsatisfactory. He shows a great loss of strength, and it is plain that the acute nephritis is telling fatally upon him. His treatment is so ordered that while he is nourished and stimulated he shall be washed out through the skin and kidneys by drinking copiously of water. His restlessness is controlled by hypodermatic injections of Magendie's solution.

May 25th.—The patient slept altogether nine hours during the night. He has taken an abundance of milk and seven ounces of whiskey during the past twenty-four hours. He has voided thirty-seven ounces of urine, containing a smaller proportion of albumin. The hyaline casts are disappearing in number, and granular casts and renal epithelia are appearing. A.M.: pulse, 124; respiration, 17; temperature, 101.3°. P.M.: pulse, 150; respiration, 24; temperature, 104.6°.

May 26th.—The patient slept but little during the night. The wound was again examined and the union found to be good. A slight eczema has been excited by the bichloride gauze. A.M.: pulse, 120; respiration, 28; temperature, 102.8°. P.M.: pulse, 138; respiration, 30; temperature, 101.6°. The patient's general condition is very poor indeed. He is sluggish, and being unable to swallow is given enemata of milk and whiskey. The urine is of 1.021 specific gravity, and contains about two per cent. of albumin, with renal epithelia and casts.

May 27th.—The patient is delirious. He passed thirteen and a half ounces of urine in the last twenty-four hours, of a specific gravity of 1.019. It contained about one per cent. of albumin, also granular and hyaline casts. At 11 A.M. he became unconscious, and died at 1 P.M.

Four hours after death I made a post-mortem examination. The healed abdominal wound was reopened and extended. Two coils of sigmoid colon were found adherent by their surfaces of contact, but the peritoneum elsewhere upon them, and covering the mesentery, was free from inflammation. Three short loops of the small intestine were in the same condition. With these exceptions the general peritoneum, in all its visceral and parietal reflections, was clean and bright, and devoid of any signs of inflammation. In other words, there was simply a local peritonitis, limited to the portions of the organs mentioned. While the parts were lying in position in the body, the left ureter could not be seen where it descended into the pelvis, and could only be traced after it had been exposed at a point nearer the kidney. The wound in the posterior layer of the peritoneum had healed, and there was no inflammation about it. The ureter crossed the common iliac artery at the place of ligation, and had I aimed to expose it, I could not have hit its position with more exactness. All the thoracic and abdominal viscera were healthy except the kidneys. These organs were enlarged, and their capsules were not adherent. The cortex of each organ was thickened and granular. Apart from the evidences of recent acute inflammation they were, from gross appearances, structur-

ally in good condition. Dr. W. H. Porter, curator of the Presbyterian Hospital, who examined them immediately after their removal, said that they showed all the characters of the acutely inflamed kidneys of pregnancy, in which the inflammation was subsiding.[1]

I dissected and mounted the specimen illustrating the operation, which presents for description the following features: The aneurism of the external iliac artery involves the whole extent of that vessel, and is of the shape and nearly the size of my clenched fist. It shows the tendency to the formation of pouches, especially on its outer and posterior aspects. A segment cut from the hardened aneurism shows it filled with a solid homogeneous clot. The end of the femoral artery, which was cut off two inches below Poupart's ligament, presents an empty calibre. The femoral vein is filled with a firm, hard thrombus. The external iliac vein is impervious and lost upon the surface of the aneurism. This condition of the vein accounts for the comparatively sudden œdema of the lower extremity and groin in the early history of the disease. The ligature was applied just above the bifurcation of the common iliac, three-fourths of an inch from the aneurism, and one and one-fourth inch from the bifurcation of the aorta. More clearly to show the relations, the sheath of the vessels has been dissected off down to the place of ligation. The healed slit in the posterior layer of the peritoneum, through which the ligature was applied, is clearly visible. The ligature is seen to have been passed round the artery without any injury to the great common iliac vein which lies mainly behind it, and without having implicated the ureter which just crosses in front. The application of the ligature around the artery, passing between the ureter in front and the vein behind, as shown in the specimen, emphasizes the importance of keeping the end of the aneurism needle within the sheath, and close to the wall of the artery. A portion of the sigmoid colon and the peritoneal covering of part of the surface of the aneurism are preserved, to show the absence of general peritonitis. In the dissected and mounted specimen, even by transmitted light, the course of the ureter crossing the artery cannot be seen through the peritoneum. The right common iliac artery and vein, and their branches, are normal.

There is also an aneurism of the aorta, commencing at the bifurcation and extending upward four inches. The aneurismal dilatation of the aorta is about four times the size of its neighboring healthy portion. Calcified plates can be felt in the walls of the aneurism. It is laid open at the back, and discloses in its interior a clot in marked contrast with that filling the other aneurism. The aortic clot is pale, firm, laminated, and appears adherent in places to the wall of the vessel. It does not wholly obstruct the calibre of the aorta, for in dissecting the specimen air could be blown through the vessel, and the day before death there was pulsation in the right femoral artery.

In a review of the case, it is clear that the operation caused death through effects wrought upon particular vital organs. There was no general shock, and no complication in the healing of the wound adequate to cause death. The result of the operative disturbance of the posterior layer of the peritoneum was too trivial to be considered, and the rest of the wound had healed with a slight local peritonitis. Upon the background of apparent health of the vital organs, there suddenly appeared disease of the kidneys.

The existence of the aneurisms and of other indications of widespread arterial disease are evidences of the profound changes wrought in the patient by the syphilitic poison, and make it probable that the reserve of vitality that separated the tissues from structural disease was nearly exhausted. Of the vital organs the kidneys had especially suffered in loss of energy from the administration of large doses of iodide of potassium, and it is reasonable to suppose that they were particularly vulnerable to depressing influences. It is conceivable that a laparotomy with a disturbance of the intestines, though it produced only a limited peritonitis, may also, as a kind of local shock, have exerted a depressing effect upon the kidneys. Granting this, it seems to me unwise, however, to lay much stress upon such a problematical element of causation in the face of other factors of known potency. The remaining operative conditions that favored the development of nephritis were the prolonged and complete etherization, and the change in the renal circulation.

Of the harmful effect of prolonged etherization upon the vital organs, the experience of careful and observant surgeons has afforded abundant evidence. Its injurious effect upon the kidneys has been especially noted. I have been so impressed with the danger of giving this agent that I limit its use as much as possible, and in some instances perform long operations under the partial narcosis of opium. In the case under review, to the depressing effect of the ether there was superadded the change in the renal circulation consequent upon the tying of the ligature. If the shutting off of the main arterial blood-supply to one-fourth of the body caused such a disturbance of the general circulation as to be noticed by a slowing and increase of volume of the radial pulse, surely there must have been a more intense effect upon the renal circulation, not only from the nearness of the renal arteries to the place of ligation, but also from the presence of the clot containing aneurism of the aorta reaching to within two inches of their origin, which must have been an obstacle to the free delivery of blood through lower channels. Through its effect upon the renal circulation the tying of the artery was a real traumatism of the kidneys, an effective blow to their tottering structure.

In choosing to tie the artery through an abdominal incision, I preferred to accept the definite and minimized risks of a laparotomy, and secure the vessel under the best mechanical conditions, rather than to encounter the uncertain risks and less advantageous mechanical conditions of an extra-peritoneal operation. By the latter procedure it is probable that the peritoneum would have escaped injury, and the patient would in great degree have been spared the extra local shock of the other operation. Assuming that in the extra-peritoneal operation the ligature had been applied with equal exactness, the effect upon the renal circulation would, of course, have been the same; neither is it probable that the depth and duration of the anæsthesia would have been less.

To discuss the comparative advantages of the two methods of operation, in reference to the treatment of a complicating nephritis, would be to enter upon considerations that are too speculative. A venesection, to have averted the effects of the increased renal blood-pressure, to have been effective, should have been performed immediately after the operation. To have let blood after the occurrence of the nephritis, which took place within twenty-four hours after the operation, does not ap-

[1] Since the above article was written, I have received from Dr. Porter, to whom the kidneys were given for examination, the following report: Macroscopic Appearances: Both kidneys were decidedly enlarged. They were paler in color than a normal gland. Their capsules were normal in thickness, and non-adherent to the underlying tissue, the surface of which was perfectly smooth after enucleation. The external surface of both kidneys was quite nodular from the incomplete obliteration of the fœtal lobulation. The cut surface in each showed that both the cortical and medullary substances were enlarged, the former being three times as thick as a normal cortex, the Malpighian pyramids were a third larger than normal. The vascular markings of the cortex were straight, but the parenchyma had the peculiar pale and granular appearance common to acute parenchymatous metamorphosis. Microscopical Examination: The epithelial cells of the straight and convoluted tubules were found to be in a state of granular transformation which had caused the epithelial cells to become swollen and finely granular. In several places the lumen was nearly occluded by this enlargement of the epithelial cells, at the other points the epithelium was becoming detached and desquamated. In some of the tubes the epithelial lining was fairly good, either not having been damaged, or it was again regaining its integrity. A few of the uriniferous tubules were found to have their lumen occluded by the retention of finely granular casts. The intertubular tissue and Bowman's capsule were thickened by an œdematous swelling, but there was no evidence of their becoming infiltrated with inflammatory products. There was a small amount of hyaline vascular thickening, but this change was evidently of long standing. The chief lesion, therefore, was that of an acute parenchymatous metamorphosis of renal organs, not an infrequent one after severe surgical procedures.

pear to me to have been advisable. The nephritis killed the patient not through a progressive increase of the local disease, but by its debilitating effect upon the whole system. It induced a profound exhaustion, to which the weakened constitution succumbed; and it was a fact, as shown by tests of the urine and by the post-mortem examination, that the nephritis was disappearing.

32 West Thirty-third Street.

AN IMPROVED METHOD OF PREPARING AND STAINING BACILLUS TUBERCULOSIS.

By HENRY L. TOLMAN,

CHICAGO, ILL.

The latest authorities on the diagnostic importance of early microscopical examinations of the sputum in suspected cases of pulmonary phthisis, are so uniform and so emphatic in their advocacy of such examinations, that no excuse seems necessary for presenting a method somewhat modified from those generally given in works on bacteria, which will be found very reliable and practicable in the hands of the busy practitioner for whom it is specially designed.

Dr. G. Hunter Mackenzie, in his very recent work on sputum, says in the preface: "The study, and especially the microscopical examination of the sputum in pulmonary diseases, ought thus to be as much a matter of routine on the part of the physician as the practice of auscultation and percussion, or the examination of the urine in vesical and renal diseases." And again, "Certain it is that the bacillary test in phthisis far outweighs that dependent upon a combination of general symptoms and physical signs." In regard to the treatment by change of climate, the same author remarks: "The period of change of climate ought to be determined by the bacillary (microscopical) test, frequently applied, and by this alone; all others may prove fallacious."

Germain Sée declares that this mode of diagnosis "is so precious that it precedes all other methods of investigation by months and often years." The discovery, so modestly propounded a few years ago, has borne rapid fruit to justify these statements, and it is not to be wondered at that the rank and file of the profession do not as yet appreciate their importance.

The works on bacteria give a multitude of formulæ for staining the bacilli of tuberculosis, all apparently equally good, and a beginner is apt to try them all, ending finally by failing with all, through lack of thorough familiarity with any. The three requisites of any method are reliability, simplicity, and ease of manipulation, all of which must be present to a greater or less degree to make the method practicable.

The theory of staining is much the same as that employed in dyeing cotton and wool, and any dye can be employed which is easily soluble in water or alcohol. As a matter of fact, however, cellulose, whether in bacteria, wood, cotton, or flax, possesses a selective power to a considerable degree, retaining some colors without difficulty, and requiring a mordant to fix others. The principal dyes which have been found best for staining bacillus tuberculosis are gentian violet, methyl violet, and fuchsine, aided by aniline oil, a weak alkaline fluid which acts largely as a mordant. The dye should be dissolved in alcohol, partly because a stronger solution can thus be made, partly also because the alcohol renders the cellulose of the bacilli more permeable to the coloring fluid. The nitric acid solution which is used to clear the specimen, removes the superfluous stain and hardens the cellulose, thus preventing it from being acted on easily by the contrast stain. The latter, therefore, should be a comparatively weak aqueous solution. Of the three colors above mentioned, fuchsine is by far the best in many respects and is easily procurable. The Weigert-Ehrlich method is the most reliable, and though a little more troublesome than the Gibbes, is much to be preferred. The proportions of the various dyes need not be exact, but it is better in such cases to follow a rule exactly, so as to reduce the sources of error to a minimum. The following will be found a good formula:

1. Aniline oil, ♏ xxx.; distilled water, ℥ iij. Mix thoroughly by vigorous shaking for five minutes and filter.
2. Saturated solution of fuchsine in commercial alcohol, ninety-three per cent.

For staining take of No. 1, ʒ ij., and of No. 2, ♏ xv., and mix. This is heated to about 50 C., and the cover-glasses dropped on the surface of the liquid and allowed to remain an hour. Watch-glasses are generally recommended to heat the mixture in, but they are liable to break, and a much better dish is one of the old-fashioned china "individual butters," or a toy-doll's saucer, or plate, three inches in diameter. Such plates are cheap and not liable to break. In preparing the cover-glasses, a small pinch of the thick portion of the suspected sputum may be taken up in a forceps and spread thinly and evenly over a clean, dry cover-glass. The latter is then heated fifteen seconds, by holding it over the flame of an alcohol lamp, moving it rapidly to and fro, and is then dropped on the staining fluid. The latter should only be prepared as wanted, as precipitation is apt to occur, or a film of fuchsine forms on the surface, which is insoluble in water, and interferes with the staining. The mixture may be used cold, but in such case the cover-glasses should be left in it at least twelve hours. Where time is an important factor, the staining fluid may be made a little stronger, and the preparations heated to 50° or 60° C., and the operation will be complete in twenty to thirty minutes, but the results are not so reliable. After the staining is complete, the cover-glasses are washed in pure water, and decolorized in a thirty-three per cent. solution of nitric acid until the sputum appears nearly colorless. A second washing in water follows, and if the red reappears, but rather pale, the process has been carried far enough. If, however, the specimen is entirely colorless after the second washing, it is an indication that it has been too long in the nitric acid, and on examination under the microscope the bacilli will be only faintly visible, if at all. Just here the greater number of failures occur, and only practice can determine how far to carry the decolorizing. It is, however, far better, in all cases, to decolorize too little than too much. In all cases of quick staining, the nitric acid solution should be much weaker, from five to fifteen per cent.

For general work, it is by no means necessary, nor even advisable, to use a double stain, but if one is desired, the best contrast to fuchsine will be found in methyl blue or iodine green. The latter is a better differential stain, but unfortunately is not permanent. A saturated aqueous solution of the methyl blue is made and the cover-glasses floated on it for from three to five minutes, and then washed.

The specimens should always be examined under the microscope mounted in some fluid—water, glycerine, or balsam—as the color in dry specimens is often deposited along the edges of the streaks of mucus, or irregular corpuscles, in such a way as to closely resemble bacilli, and easily deceive an unpractised eye. Glycerine is by far the best, as it is soluble in water, and can be washed off if it is desired to permanently mount the specimen in balsam. The glycerine, also, by its viscidity, will hold the cover-glass to the slide when an examination is made with an immersion lens.

A strong obstacle to the frequent examination of sputum is the difficulty of obtaining it in a fresh state when desired. A patient may not be able to furnish it when the physician calls, and the latter is forced to make his diagnosis by other means. After a series of experiments, however, I find that specimens of sputum can be

kept for from twenty-four to seventy-two hours in the following mixture:

Aniline oil solution, as above.....	3 ij.ss
Fuchsine stain	♏ xx.
Carbolic acid, ten per cent. solution ..	♏ v.

This can be poured in a wide-mouthed ounce bottle, and given to the patient with directions to preserve in it the sputum first coughed up in the morning. If, as often happens, there is no expectoration on rising, the products of the first coughing-spell during the day should be kept, though they will doubtless be contaminated with starch grains, and animal and vegetable fibres from the morning meal. This solution in hot weather will keep twenty-four to thirty-six hours, and in winter, in a cool place, three or four days; but it is better if freshly prepared. The sputum should be left in the stain at least twenty-four hours, and if at the end of that time it is not sufficiently colored, it may be spread on a cover-glass, and treated in the usual manner as unstained specimens. If it is sufficiently stained, a small portion is placed on a cover-glass, pressed out, and cleared in a very weak five per cent. solution of nitric acid. After a prolonged immersion in a mass in the staining fluid, the sputum becomes very friable, and it is somewhat difficult to spread it out evenly on the cover-glass; but this in no degree interferes with the other operations, nor with the accuracy of the results. I have repeatedly kept specimens a week in the fluid, and then examined them, the only change apparently being that the bacilli appeared slightly swollen by the long soaking. The experiments in this direction were made with a view of getting the morning sputum of patients, as the excuse often made by them is that they could not save it. Some physicians have recommended saving it in a pill-box, handkerchief, or piece of paper; but anyone who has tried to soften up a dried specimen will only advise this as a *dernier ressort*. Another advantage of this new method is, that it materially saves the time of the physician, who has his specimen stained as soon as he receives it, and can at once proceed to make a microscopical examination.

Besides the Weigert-Ehrlich method, there are many other processes given in the numerous works on bacteriology, but none of them appear to be so good. The Gibbes double-staining method has been very much advocated, but it is lacking in the important quality of giving the most prominence to the first stain. The preparations should lie a long time in the fuchsine solution, but only a few minutes in the methyl blue, while by the Gibbes method they are subjected equally to the action of both colors. The result is that the tubercle-bacilli are insufficiently stained, or the sputum is over-colored. Methyl and gentian violet, which are also recommended, have the disadvantage of not being permanent, and also of being so diffusive as to stain other micro-organisms than the tubercle-bacilli.

As to the power required to study bacilli tuberculosis, a good immersion, eighth or tenth, is an indispensable requisite. They can be seen in mass with an inch objective, rcognized individually under a student's fifth, but for clinical purposes it is reckless to base a diagnosis on any such examination. Thanks to the advance of optical science, a homogeneous immersion objective can now be bought for the same price that a dry fifth cost a few years ago. One of the best moderate-priced glasses in the market, amply sufficient for bacteriological work, is a first-class adjustable homogeneous immersion tenth, balsam angle 116°, made by the Spencers, which only costs $60. It has an ample working distance, and should be made specially to work with central light. By means of the cover correction, it can also be made to do fair work with water or glycerine as the immersion fluid. Another requisite is a high-angled sub-stage condenser, the Abbe being the best. The stand likewise should be firm, with a heavy base.

There is still a very large field of research in the study of tuberculous sputum. It differs greatly in different cases, in different stages of the same case, and it seems probable future discoveries will furnish data from which valuable conclusions can be drawn, by examination of sputa, as to the stage and severity of the disease. The number of the bacilli is by no means conclusive, for they appear and disappear, especially in chronic cases, without any cause, and unaccompanied by corresponding exacerbation or diminution of symptoms. Mackenzie, in his work above quoted, says he has even been unable to find them in the sputum of a patient, a chronic case, the day before death. They are much more numerous in acute cases, and always to be found to some extent, as far as my observation extends. Their number is sometimes almost incredible, a single tubercle, about one-tenth of an inch in diameter, containing on a careful estimate over one million. Acute cases, also, are to be distinguished by the presence, to a greater or less degree, of other micro-organisms, which are easily stained by the methyl blue. One very noticeable kind is a short, thick species of bacterium, sometimes nearly square, with a uniform breadth of about four micro-millimetres, always occurring either singly or as diplococci. Another kind is an extremely delicate bacillus, about two-thirds the length of the bacillus tuberculosis, and much slenderer, which stains blue very faintly, and only after long immersion in the coloring fluid. It will not take the fuchsine stain, and is, therefore, easily overlooked. Of course, in all examinations for these adventitious schizomycetes, freshly-distilled water must always be used, to prevent possible contamination. There are always present also numerous zooglæ of micrococci, probably having no diagnostic importance. As, however, they seem to be absent in chronic cases, especially where the patient is enjoying a fair state of health, it is not improbable they may serve as some indication of the comparative strength of the patient and the severity or acuteness of the disease. The fæces, at least in acute cases, frequently contain bacilli tuberculosis in considerable numbers. They appear somewhat swollen, take the stain diffusely, but lose it easily, and they, as well as the bacilli in the sputum, can be stained without the use of aniline oil, an alcoholic solution of fuchsine in pure water being sufficient.

Simulated Hyaline Casts.—Dr. F. Tilden Brown, of New York City, writes: "Dr. L. E. Armstrong calls attention, in a recent issue of The Medical Record, to a method of manipulation of the microscopic mounting devised by him to facilitate the detection of hyaline casts in the urine. I cannot refrain from making a decided objection to this method, because by it beautiful *fac-similies* of the hyaline cast are artificially produced. Although Dr. Armstrong closes with the warning to make sure that we have not rolled out a white blood- or pus-corpuscle to simulate a small hyaline cast, he fails to warn us against the same error with ropy mucus. Now, when this very common ingredient of the urine is present, and the fluid on the slide is allowed to gravitate in any direction by tilting, or when this cover-glass is pushed along, we find excellent examples of the hyaline casts of all sizes; such excellent counterfeits that the novice would be deceived, at the same time somewhat mystified, because his microscopic examination so often revealed casts, whereas the chemical examination was as often void of even a trace of albumin."

Treatment of Asphyxia of the New-born.—Dr. W. M. Trow, of Northampton, Mass., writes: "In view of recent articles in your journal upon the treatment of 'Asphyxia of the New-born,' permit me to say that, for more than twenty years, I have, with good results, treated those cases by elevating the hips so as to let the head hang down, and holding the child in that position for a few seconds, more or less, as the case might demand."

Clinical Department.

LYMPHADENO-SARCOMA OF THE NECK—REMOVAL — SARCOMATOUS PERIOSTITIS OF PETROUS PORTION OF TEMPORAL BONE—DEATH.

WILLIAM STONE TORREY, M.D., of Scranton, Pa., sends us the following interesting case: "Henry F——, German, aged thirty, consulted me on April 19, 1886. The patient had led a somewhat checkered life, being at the time connected with a third-class travelling theatrical company. Six weeks prior to consulting me, and while in New Orleans, he 'caught cold.' Shortly afterward he began to suffer from pain in his left ear and in the temporal region of the corresponding side. At about the same time he noticed the appearance on the left side of the neck of a small tumor, which continued to grow rapidly until it reached the size of an English walnut. It then remained stationary. He travelled from New Orleans to Scranton, stopping at various places on the way and consulting a physician in nearly every place. During this time the pain in the ear and temporal region had increased in severity until it had reached a point where it was unendurable.

"When I first saw the patient he was on the verge of suicide, and he told me afterward, had he not at that time obtained speedy *temporary* relief, that he should have ended his life by his own hand. No syphilitic history was obtainable, and there were no manifestations of the disease present. *Examination* showed a tumor about the size of an English walnut, firm, tense, and slightly movable, situated in the left cervical region, a short distance posterior to the angle of the jaw, directly underlying the sterno-cleido mastoid muscle, and apparently bound down by the deep cervical fascia. The overlying integument was stretched, somewhat reddened, but not otherwise affected, and was freely movable over the surface of the tumor. The pain in the ear was of a lancinating character, and accompanied by a roaring noise. The pain in the temple followed the course of distribution of the auriculo-temporal branch of the third division of the fifth cranial nerve.

"*Examination of the ear* revealed a rudimentary fringe in place of the tympanum, ear dry and slightly congested.

"The patient also suffered from profuse diaphoresis, which was continuous and not paroxysmal. All of the various therapeutical indications were followed with the object of checking this symptom, but without avail. Counsel was obtained, and a diagnosis of lymphadenoma agreed upon. The pain was somewhat mitigated for a few days by large hypodermatic injections of morphia; but as the patient was clamorous for something radical, I proposed an operation for removal of the mass, which he gladly accepted.

"*Operation, April 28th.*—The patient being anæsthetized, was placed upon a table with his head turned to the opposite side from that on which the tumor was situated. The sterno-cleido mastoid muscle was made tense, and an elliptical incision three inches in length was made, with the convexity toward the angle of the jaw. The elliptical course was followed through the integuments, and then the muscle divided parallel with the long axis of its fibres. The deep cervical fascia was then opened, and when the tumor came into view I introduced my index-finger and enucleated it without difficulty.

"After enucleation three fingers could be introduced into the wound, in a direction upward, backward, and inward, to a depth corresponding to the metacarpo-phalangeal articulations, and the styloid process could be distinctly defined. The operation was performed under irrigation with a solution of bichloride of mercury, one part in two thousand.

"The wound was thoroughly cleansed, all bleeding checked, and a rubber drainage-tube inserted and secured at the bottom of the wound by means of a suture of carbolized catgut. The deep portions of the wound were approximated through the medium of two silver-wire sutures, introduced at a considerable distance from the edges of the incision. The superficial portions were closed by interrupted sutures of iron-dyed silk. Iodoform and a large Gamgee dressing were then applied. The patient rallied rapidly from the operation. I was hastily summoned the following night, and found upon my arrival some hemorrhage, which was effectually controlled by injecting hot carbolized water through the drainage-tube.

"After this the patient was apparently going on to speedy recovery without further complication, and was sitting up on the fifth day after the operation. The wound closed primarily, and a handsome cicatrix remained.

"Through the courtesy of Dr. D. Hayes Agnew, the tumor was examined by Dr. Henry Formad, Pathologist to the University of Pennsylvania Hospital. He reported that the tumor was a 'lymphadenoma, in which sarcomatous degeneration had just begun.'

"The condition of the patient for a period of ten days subsequent to the operation was very encouraging. The pain in the ear and temple was for a time entirely relieved. The diaphoresis, although it ceased for a short time after the operation, soon recurred. About the eleventh day it was apparent that the disease was returning. The pain in the ear and temple increased in severity, although at *no time* while the patient was under my care did it reach the degree which had existed prior to the operation.

"On May 18th I sent the patient to Dr. D. Hayes Agnew, at the University of Pennsylvania Hospital, Philadelphia. The tumor had steadily increased in size from the time of the recurrence, and at that time was quite as large as when I first saw it.

"Dr. Agnew had previously been placed in possession of a full history of the case, and, after examining the patient, offered to repeat the operation, with every probability of a like result. The patient refused a second operation, and returned to his home in Dayton, O. His medical attendant, Dr. James Hays, of Dayton, sent me the subsequent history of the case, which I append:

"'I was called to see Henry F—— on June 9th. I found him very weak, and attributed his prostration to loss of rest and travel, but soon learned that I was mistaken, for he never seemed to rally in the least. He said that the tumor had been growing faster since the operation than ever before, and it continued to grow very rapidly, until it extended from the spine to the larynx, and from the top of the ear to the clavicle, and so pressed upon the larynx that at times he was nearly suffocated. The tongue was pressed out of its place, and it was with great difficulty that he swallowed even small quantities of fluids. He suffered no pain except in the ear. The jaw became stiff. The tumor was very firm and very distinctly osseous. He was very much emaciated, having taken no solid food, and very little of any kind, from the time I first saw him until his death, July 16, 1886.'

"The rapidity of the process was, without doubt, stimulated by the operation. Had *no* operation been resorted to, the patient would have taken his own life or succumbed to the agonizing pain long before July 16th. Consequently, that his death was hastened by the operation, I doubt.

"The primary condition we *know* was a lymphadenoma in which sarcomatous degeneration occurred.

"Subsequent to the operation it seems probable that a sarcomatous periostitis of the petrous portion of the temporal bone was developed, with an accompanying perineuritis. Had the periostitis and perineuritis been a primary condition, the pain *would not have been relieved* by removal of the tumor.

"We regard the pain in the temporal region as due to irritation at the stylo-mastoid foramen of the communi-

cating branch from the seventh to the fifth cranial nerve, through the auriculo-temporal branch of the third division of the fifth.

"The profuse and continuous diaphoresis I regard as due to involvement of the cervical sympathetic.

"My object in reporting this case is to add something to the very meagre literature of a very important subject."

THE USE OF COCAINE IN MINOR SURGERY.

DR. H. J. SCHIFF, of New York City, writes that he has never seen any constitutional symptoms from the use of cocaine in minor surgery. The principal danger, he thinks, is from parenchymatous hemorrhage coming on about an hour after operation. Another mishap which occurs in rare cases is sloughing of the soft tissues into which the injections have been made. He continues: "What operations can safely be performed under cocaine anæsthesia? is a question often asked. The answer is: 1. All operations which come under the domain of minor surgery. 1. All operations connected with the different mucous membranes of the body. The rules which are to be followed are these: 2. Never use less than a four per cent. or more than a ten per cent. solution, because less than four per cent. has no effect, and more than ten per cent. is unnecessary. 2. Have the number of injections as few as possible, and as far distant from one another as possible, as many injections, and near together, are not only unnecessary but are liable to cause large ecchymoses under the integument. 3. Never operate on inflamed tissues under cocaine, as the anæsthesia you get is almost nil. In these cases prefer etherization. 4. Cocaine should not be attempted to be used in children who are too young to have its use explained to them. 5. Never perform an operation which you think will take over fifteen or twenty minutes under cocaine. 6. Always use an Esmarch bandage where practicable, and have it placed on the part before injecting the cocaine. 7. Use as much cocaine as is necessary. I have used as much as two drachms of a ten per cent. solution without any ill effects. 8. Always use a very fine hypodermatic needle for the injections. 9. Avoid injections into veins. 10. Always use fresh solutions in operating."

PECULIAR CONGENITAL MALFORMATIONS.

DR. J. C. NEAL, of Archer, Fla., writes that he recently delivered a negress of a full-term child. The labor was difficult and the child was born dead. Its head was hairless, it had small grisly attachments in place of ears, and no external meatus. The eyes were very small, the nose flat and without nostrils, the mouth without lips, being a mere hole half an inch in diameter. The feet and hands lacked the ungual and second phalanges, and the skin was "webbed" between the remaining phalanges. The body of the penis was absent, though the glans was well developed. There were no testes in the scrotum. The abdomen was incurved on the right side and enlarged on the left. The gall-bladder was external and on the left side.

ANOTHER CASE OF CONGENITAL MALFORMATION OF THE EAR.

DR. C. S. CAVERLY, of Rutland, Vt., reports the case of an infant with congenital deformity of the ear. The right auricle of the child was a shrivelled mass of integument and cartilage. The helix was present, as were also the lobule and a prominent antitragus, but the fossa of the antihelix, the concha, and the tragus were wanting. There was a depression beneath the antitragus that, at first sight, seemed to be an external canal, but which was found, by introducing a probe, to end in a cul-de-sac about one-eighth of an inch deep. There was a secretion from this false meatus which was similar to the normal wax. The child soon after birth showed signs of torticollis, the right sterno-cleido-mastoid muscle being affected. Five days after the cord had dropped off, leaving an apparently healthy navel, blood was seen oozing from the umbilicus; this continued for about ten days and then ceased definitely. The infant, although escaping all acute summer disease, is now very puny and is becoming emaciated. The parents are both healthy, and have two healthy children. The mother nurses the child, which shows as yet, at the age of nine months, no signs of teeth.

Progress of Medical Science.

ECHINOCOCCUS IN THE ARM.—Dr. Nolte describes the case of a woman who, in April last, consulted him on account of a swelling in the inner bicipital furrow of the left arm. It had been present three years; it was small and painless, and grew steadily, but until lately did not prevent her from performing hard field-labor. She took no notice of it, and did not seek medical advice until it became troublesome. When seen, it had the size and shape of a goose's egg, and felt hard and distended; there was no fluctuation or murmur; the tumor was quite painless. At the lower part was a small opening, from which fluid escaped. The arm having been carefully cleansed, an incision was made under strict antiseptic precautions, when there escaped about fifty echinococcus cysts, varying in size from a pea to a walnut. The wound healed soon, and recovery was complete.—*Allgemeine Medicinische Central-Zeitung.*

HYALINE DEGENERATION.—Dr. H. Stilling, of Strassburg, has adduced evidence to show that so-called hyaline degeneration may pass on to amyloid degeneration, regarding the former as an early stage of the latter. To test this point it was necessary to show that in recent cases of amyloid degeneration areas of hyaline change are present, and that a transition between the two forms can be traced; and also to establish the fact that hyaline degeneration is met with in those diseases which are known to give rise to waxy degeneration, the hyaline replacing the waxy form in cases where the chronic disease has been cut short by some intercurrent affection. Stilling's researches were conducted upon the spleen, as being the organ which is the earliest to undergo amyloid change; and he employed for the detection of that morbid material, and distinguishing it from hyaline, the iodine and sulphuric-acid reaction mainly, various other staining reagents being used for the tissues. He says that he has quite abandoned methyl-violet as a test for waxy disease, because it has the property of reddening colloid, and is not so delicate in the detection of waxy material as iodine is. Details are given of a case of phthisis, where the spleen showed a combination of amyloid and hyaline change, and a number of other cases of acute and chronic disease, where the hyaline product was found, are referred to. Hyaline degeneration in the spleen is found in the walls of the arterioles as well as in the follicles themselves. It commences in the former in the muscular coat, destroying the fibres and their nuclei; not invading the intima, but sometimes involving the adventitia. In the follicle, bands and wedges of the material separate the lymph-corpuscles, and the change is most marked in the centre of the follicle, where it commences by the swelling and transformation of the protoplasm of the cells. Stilling regards it as a deposit, and not as a metamorphosis, and proceeds to point out the striking similarity, not only in appearance but in distribution, that this hyaline change bears to waxy degeneration of the same organ. The diseases in which the hyaline deposit was found were, with two exceptions, of the same class—viz., chronic inflammation of bone and joints, and chronic inflammatory (tubercular) disease of the lungs—

as those in which waxy disease occurs, the only distinction being that the hyaline change occurred in cases of shorter duration than the amyloid did. In one case the spleen appeared to be amyloid, but it did not yield the characteristic tests of that degeneration, and was found to be the seat of abundant hyaline changes. It is possible that the involvement of arteries in the change has something to do with its subsequent progress; but an explanation of the difference between the hyaline degeneration of tubercle and that which seems to be only the precursor of amyloid disease is, Stilling thinks, to be found in the lack of vascular supply in tubercle, as compared with that of the regions affected by amyloid degeneration. The degenerative process in a tubercle is thereby arrested at the hyaline stage.—*The Lancet.*

Papilloma of the Trachea removed Laryngoscopically.—Dr. C. Labus relates the case of a man, aged sixty-three, who had suffered for nearly two years from difficulty of respiration and other signs of obstruction in the air-passage. With the laryngoscope a tumor could be seen nearly filling the trachea and growing at the level of the fifth tracheal cartilage. By means of a peculiar forceps the tumor was torn away piecemeal. In seven sittings sixty pieces were removed. The patient experienced immediate relief, and four months after the operation, although he occasionally expectorated little pieces of the tumor, his respiration was easy, and he could run and ascend stairs without difficulty. On microscopical examination of the pieces removed, the tumor was found to be a papilloma.—*Monatsschrift für Ohrenheilkunde.*

Elimination of Mercury after Hypodermatic Injections and Inunctions.—The system of treating syphilis by means of hypodermatic injections having been of late largely employed, any information on the subject of the rate of diffusion and elimination of the mercury thus introduced is likely to prove valuable. An elaborate series of observations on the elimination of mercury by the urine, after hypodermatic mercurial treatment, has just been published by Dr. Sukhoff, "ordinator" in the syphilitic clinic of Professor Tarnovski, in St. Petersburg. The preparations used were a solution of corrosive sublimate, a similar solution with the addition of common salt, Bamberger's albuminate of mercury, the same author's peptonate of mercury, Max Bockhart's sterilized "blutserum-quecksilber," a solution of bicyanide of mercury (recommended first by Cullingworth), a solution of the mercurial amide of formic acid, or Liebreich's hydrargyrum formamidatum, an emulsion of calomel, and, lastly, a solution of biniodide of mercury in iodide of potassium. The above solutions were mostly of the strength of one per cent., and the doses given usually corresponded to one-sixth of a grain of the salt used. Mercury was found in the urine about five hours after a single injection of any of the above, except the solution of the biniodide, which was not followed by any signs of mercury in the urine until after ten daily injections. During the course of treatment the amount of mercury in the urine gradually increased, but not at the same rate for all preparations. After the conclusion of the treatment the quantity eliminated continued for one or two weeks as great as it had been at the end of the treatment, and then declined, the fall being more gradual than the rise had been. There were no breaks in the elimination, and no difference was found in the quantities eliminated during different periods of the day. The organism gradually and spontaneously freed itself from all the mercury which had been introduced. Where mercurial stomatitis existed a much larger quantity of mercury was found in the urine than in other cases; the author therefore suggests that when stomatitis has been produced much smaller doses should subsequently be administered. The most active of all the preparations employed appeared to be the formamidate, for after a single injection the mercury was entirely eliminated in a couple of days. Another series of observations on the urinary elimination of mercury has been made by Dr. Michaelovsky, also an "ordinator" of Professor Tarnovski's clinic. Here the form of treatment employed was that of inunction. The observations agree with those of Dr. Sukhoff in regard to the uniform and gradual method in which mercury passes from the system. Several different ointments were employed for the purpose of comparison. Mercury was detected in the urine about twelve hours after a single inunction of half a drachm of ung. hydrarg. cinereum duplicis, which contains fifteen grains of metallic mercury, no difference being observed when the ointment was prepared with cacao butter instead of suet, as is usual. A similar effect was produced in the same time by an inunction with half a drachm of Oberländer's mercurial soap, which also contains fifteen grains of mercury. An inunction of a drachm of the simple ung. hydrarg. cinereum, which contains twenty grains of mercury, was required to produce as rapid an effect on the urine as half a drachm of the two former preparations. Oleate of mercury was also tried in quantities of half a drachm, which contained fifteen grains of the yellow oxide. In this case three inunctions were required. The least active of all the ointments employed was the ung. hydrarg. sublimat. corros., which contains eight grains of the sublimate to the drachm. Here eight inunctions of half a drachm, or even a drachm, of the ointment were required before the urine answered to the test for mercury.—*The Lancet.*

The Brain of Gambetta.—M. Duval (Director of the Laboratory of Anthropology) has recently given to the Society of Anthropology at Paris a detailed description of the external configuration of the brain of Gambetta. He draws special attention to the fact that the cortical structure in the neighborhood of Broca's convolution has become markedly augmented. Usually this part of the brain assumes the form of an M, the two vertical limbs or sulci inclosing a small, valve-like portion in the shape of a V. In the brain of Gambetta, however, as has been noted in other cases as well, this V-shaped portion has become doubled on itself, and assumed the form of a W instead of a V. When we recall the fact that Broca, in his memoirs, attributes to this part of the cerebral cortex (left or right-sided, according as the individual is right or left-handed) the function of articulate language, the unusual development of this convolution in Gambetta and others confirms, to a certain extent, this opinion, now generally accepted. Gambetta was a great orator, his memory for words being most remarkable. He had acquired a rapid and most exact method of expressing his ideas. It is, therefore, somewhat admissible to associate his great oratorical power with this increased growth of cortical tissue in the neighborhood of Broca's convolution.—*The British Medical Journal.*

A Solvent for Sordes.—Dr. A. D. MacGregor speaks highly of boric acid as a topical application in the unhealthy condition in which we frequently find the mouth, tongue, and teeth in severe cases of typhoid fever. He says, in the *British Medical Journal:* The mouth is hot; the lips dry, cracked, and glued to the sordes-covered teeth by inspissated mucus and saliva; the tongue dry, or even glazed and hard, brown or black, crusted with a fetid fur. Under these circumstances a pigment containing boric acid (30 grains), chlorate of potassium (20 grains), lemon-juice (5 fluidrachms), and glycerine (3 fluidrachms), yields very comforting results. When the teeth are well rubbed with this, the sordes quickly and easily becomes detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria, the chlorate of potassium cools and soothes the mucous membrane, the glycerine and lemon-juice moisten the parts and aid the salivary secretion.

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THE CAUSE OF URETHRAL FEVER.

MR. REGINALD HARRISON contributes a short paper on this subject to the July issue of the Liverpool *Medico-Chirurgical Journal*, in which he takes the ground that almost all cases of fever occurring after internal urethrotomy are due to poisoning from alkaloidal substances contained in the urine. His attention was first called to the urine as a possible cause when studying his notes of operations upon the urethra. He was struck, he says, by the fact that neither rigors nor fever showed themselves until after micturition had been naturally practised, or there was evidence that urine had found its way into the wounded urethra and was lodging there.

This view was afterward strengthened by the results of Bouchard's studies concerning the toxic elements of normal urine. This observer found that the urine contains a certain amount of the alkaloids formed in the intestines (ptomaines), which are absorbed by the intestinal mucous membrane and excreted by the kidneys.

To the objection urged against this theory that rigors and pyrexia are not produced when extensive subcutaneous extravasations of urine occur, Mr. Harrison replies that the conditions are very different in the two cases. A mixture of blood and urine, such as is found after internal urethrotomy, he thinks, is capable of producing very different compounds from those that extravasated urine alone is likely to yield. Again, when urine is extravasated into the tissues, its action is that of a virulent local poison, under the influence of which the contiguous tissues are killed outright, probably before they can exercise any power of absorption.

Another objection which might be raised is, that cases have proved rapidly fatal from urinary fever where there was no evidence that the urethra had sustained any appreciable lesion. The writer believes, however, that any statement that the urethra is free from injury, should be received with caution. Though the operator is not conscious of having inflicted a lesion on the urinary passage, with an instrument which he has been using, nor the patient show evidence of it immediately, this by no means implies that a structural lesion on the urethra has not been inflicted. As a rule, he says, it is not the most difficult cases of catheterism which are most liable to urinary fever. In those in which structural damage is inflicted, or false passages made, the injury is usually on the distal side of the stricture, and consequently well protected from urine infiltration or contact. In such cases the amount of shock must be greater than that caused by the slight wound of a urethrotomy knife, which, Mr. Harrison asserts, is almost invariably followed by rigors and fever.

That there are other forms of pyrexia, such as the so-called irritative and the malarial, following occasionally the mere passage of a catheter or a sound, the author does not deny; but these have nothing in common with the severe urinary fever which is usually referred to nerve-shock, but which the author regards as caused by the absorption of poisonous matters contained in the urine.

The practical point of these views is the bearing which they have upon the prophylaxis of urinary fever. This can be prevented, Mr. Harrison maintains, by providing for free drainage of the bladder and removal of the urine as rapidly as it is excreted. This drainage is to be secured by means of a perineal section performed simultaneously with the internal urethrotomy. The author says that he has never seen rigors and fever after combined internal and external urethrotomy, so long as the bladder drainage of urine through the external perineal wound was free and uninterrupted. Fresh urine flowing freely over the glazed surface of a wound is innocuous, but when it is pent up, as in a urethral wound, it is apt to be speedily converted into a most destructive and poisonous agent.

It is not improbable that Mr. Harrison's news of the causation of urethral fever are in the main correct; but the necessity of resorting in every instance to a perineal section is not so evident. The author's experience as to the frequency of this complication is certainly not that of most surgeons. He met with it so constantly that he was even led to practically abandon the operation of internal urethrotomy for a number of years, and resumed it only when he adopted the method of combined internal and external operation.

CASTRATION IN MENTAL AND NERVOUS DISEASES.

A SERIES of articles upon this subject appears in the October number of the *American Journal of the Medical Sciences*, from the pens of Sir T. Spencer Wells, Professor Alfred Hegar, and Dr. Robert Battey A medical symposium from persons of such eminence, and on a subject of such vital and present interest, will naturally attract much attention.

The opening article, by Spencer Wells, is a masterly and philosophic presentation of the subject. While the writer takes decidedly conservative views, these are presented with a force and earnestness which cannot but make a most lasting impression. The development of specialists, and with this the rise and spread of the laparotomy epidemic, are pictured in a graphic manner. "The growth of specialization," he says, "is at the same time a benefit and a peril." There should be great specialists, but there is danger in the rapid evolution of a multitude of minor specialists.

"And," he says, "herein is the danger with groups of gynecologists. It would not answer for all to run on in the same track. To be anything, each must hunt up his own little therapeutical quarry and keep to it. Groping among details is an absorbing and paralyzing occupation

and soon the curve of a pessary, or the lining of a speculum fills the field of vision, and great principles are lost sight of. With one such idea kept steadily running in the same groove, a man may quickly find his way down to the lowest level of routine womb-scaffolding or singeing."

Taking up the special subject of oöphorectomy, a brief sketch is given of its development. The operation is not viewed by the writer with a sympathetic eye. It is at best, he thinks, a very sorry alternative, and not one to boast of.

"When a surgeon is obliged not only to put on the black cap, but to become the executioner, the only redeeming point in the business is the skill he may display in carrying out the sentence. The blot is the necessity for such a measure. As society is wanting in reference to crime, so the profession is wanting in reference to disease. There is too much law, and not enough gospel; too much doctoring and not enough philosophic pathology. It might be otherwise. With better principles and training, we should see less of crime and its consequences. With a keener estimate of the higher functions of medicine, more thinking, more research, and systematic dialectical reasoning, there would be more defiance of disease, more life-giving power, and less of surgery."

Further on the writer speaks of the danger from the increasing popularity of the operation of spaying.

"Now," he says, "the oöphorectomists of civilization touch hands with the aboriginal spayers of New Zealand. The ovary is, in fact, the nucleus of gynecological science and the source of gynecological practice. Its products give occupation to the obstetrical art. The disturbances it sets up in the system at large are the prairie grounds of its proletarians. The morbid structural changes, displacements, and accidents of it and its appendages are the arena of its operators. Wonderful, indeed, is the hydra-like tolerance of women of sections and mutilations under their hands!"

Sir Spencer Wells comes to the following practical conclusions:

"That the operation of oöphorectomy, or the removal of normal ovaries, is one which may be advised in some cases of uterine fibroids, and in uncontrollable uterine hemorrhages.

"That it is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina.

"That the right to use it is very limited in cases of ovarian dysmenorrhœa or neuralgia, and only when they have resisted all treatment, and life or reason is endangered.

"That in nearly all cases of nervous excitement and madness it is inadmissible.

"That it should never be done without the consent of a sane patient, to whom its consequences have been explained.

"That the excision of morbid ovaries and appendages should be distinguished from oöphorectomy, and ought not to be done without the authority of consultation, as in most other cases of abdominal section.

"That in nymphomania and mental diseases it is, to say the least, unjustifiable."

The contributions of Professor Hegar and Dr. Battey are fully worthy of careful reading, but they are especially technical contributions and quite lack the literary quality and philosophic character of the article by Sir Spencer Wells.

Professor Hegar holds that castration is indicated in a psychosis evoked or maintained by pathological alteration of the sexual organs, and in a neurosis originating from the same source, as soon as this imperils life or hinders all occupation and all enjoyment of life. The indication is also present when that disease represents only one causal factor in the genesis of the affection, without the removal of which a cure is not to be thought of. The remaining causes of suffering must be in this case accessible to treatment. Other milder methods of treatment must have been tried previously without success, or, as in the case of many small tumors of the ovaries and tubes, must from the outset give no promise of success. Castration must actually affect the cause which occasions or keeps up nervous irritation. The operation will thus be of use when a degenerated or dislocated ovary represents the irritative focus, or as soon as a greatly swollen and retroflexed uterus presses on the sexual plexus and the organ is brought into a state of atrophy. Castration promises success when the bleeding and anæmia occasioned by a fibroma play an important part in the maintenance of a psychosis, so that a cure does not appear possible without getting rid of that evil; but castration is absolutely no universal remedy for any neurosis originating from a genital-organ disorder, or kept up by the same. The cessation of ovulation will avail nothing if the irritation starts from the nerves which are compressed in a shrunken cicatrix of the broad ligament, or elsewhere in a cicatrix of the pelvic connective tissue.

Dr. Battey has performed castration for the relief of mental and nervous disorders, and these may be divided into three classes: Oöphoro-mania, oöphoro-epilepsy, and oöphoralgia. He uses the terms oöphoro-mania and oöphoro-epilepsy instead of hystero-mania and hystero-epilepsy, because clinical experience teaches him that these disorders are dependent upon a nervous irritation proceeding from the ovaries, and not from the uterus. He finds the disorders existing (*a*) in cases in which he recognizes organic disease of the ovaries, and is not able to recognize any organic disease of the uterus; (*b*) in cases of uterine as well as ovarian disease, when the diseased ovaries are removed, the nervous disturbance disappears, notwithstanding the fact that a displaced or diseased uterus may remain. In his experience the time required for the disappearance of nervous disorders, after removal of the ovaries, has been quite variable. In general, epileptiform manifestations have ceased at once. Some of the cases have required for a time the tranquillizing effects of the bromides to ward off threatening symptoms, while others have needed nothing. His cases of mania have all been quite chronic, and the improvement has been slow. In oöphoralgia, in a few instances, the cure has been immediate and permanent. In the majority it has been slow and gradual; and in others nothing has been gained for even two years after the operation. In a few the long-established opium habit has proved a complete bar to recovery.

In his cases, which have had two years or more to

test them, seven have been cases of oöphoro-mania, of these 1 was cured and 4 improved; 9 were cases of oöphoro-epilepsy, all cured; 20 were cases of oöphoralgia, and 13 were cured and 3 improved.

Dr. Battey inserts communications from several prominent American gynecologists, who give opinions regarding the indications for oöphorectomy which, in the main, agree with the distinguished originator of the operation.

MEDICAL WORKS PUBLISHED AS ADVERTISEMENTS FOR DRUGS AND APPARATUS.

A CORRESPONDENT calls our attention to certain subterfuges, which, though perhaps not actually dishonest, certainly are the opposite of ennobling, and are not calculated to inspire the respect of the better portion of the profession. He refers particularly to the publishing, under the guise of legitimate medical books and periodicals, those which are really but advertisements of certain particular remedies or apparatus, in which the parties writing, or having them written, are financially interested.

For instance, a work on prescriptions, under the guise of an impartial treatise, contains remedies prepared almost exclusively by leading drug houses. Again, another so-called treatise on electricity has for its special object the indorsement of a particular apparatus, manufactured solely by an instrument firm, and does not make any reference whatever to other apparatus than that made by this company. There are also several periodicals, offered at low rates of subscription as being devoted to general or special medicine, which show the same deception. Our correspondent very truthfully adds: "All this seems to me to be unfair to the doctor who pays for, and expects to get, an unbiased exposition of the subject referred to by the title, and though they may indicate to what an extremity some clerically gifted members of the profession may become reduced, they certainly do not increase the reader's respect for them by accepting such propositions to increase their incomes, as must precede the sprouting of each one of these weeds in the medical garden of knowledge." The remedy consists in buying books from firms which make publishing their only business, and who are above the suspicion of catering to the interests of any advertising dodge.

TWO ARMS BROKEN DURING A GAME OF BALL.—Professor S. F. Baird vouches for the correctness of the following very singular coincidence: On September 13th, just before the commencement of a base-ball game, J. J. Corridon, of the United States Fish Commission nine, in throwing the ball from the catcher's position to second base, broke his right arm about midway between the elbow and shoulder. He was taken from the field in a carriage. At the beginning of the fourth inning, W. W. J. Murphy, who had been previously playing as short-stop, relieved E. Fish in the catcher's position. During this inning Mr. Murphy, in throwing the ball to the third base-man, met with an accident precisely similar to that which happened to Mr. Corridon. Both patients made a good recovery.

THE WELL-KNOWN PHYSIOLOGIST, Dr. Cyon, has succeeded Mme. Adam as editor of the *Nouvelle Revue.*

News of the Week.

MICROHÆMIA is the name coined by Rosenbach to designate a condition in which the blood is poisoned with micro-organisms.

OF SEVEN RUSSIANS bitten by mad dogs in May last, and subsequently treated by Pasteur, three have just died. —*Med. Zeitung*, August 23d.

THE CHARITY HOSPITAL TRAINING-SCHOOL FOR NURSES now occupies the beautiful stone building on the southern end of Blackwell's Island, formerly used as a small-pox hospital.

DR. JAMES ANDERSON, of this city, died on October 7th, in the eighty-ninth year of his age. He was one of the oldest medical practitioners in the city, having practised continuously from 1820, when he graduated at the New York College of Physicians and Surgeons, until a few years ago. He was born in this city, for several years was President of the New York Academy of Medicine, and was a member of several scientific and benevolent medical associations.

THE NUMBER OF INSANE IN NEW YORK CITY INSTITUTIONS is 5,237, distributed as follows: Men in city asylum, Ward's Island, 1,944; women in Lunatic Asylum, Blackwell's Island, 1,879; women in branch asylum, Ward's Island, 614; women in Homœopathic Hospital, 150; epileptics and idiots, Randall's Island, 650; total, 5,237. The Commissioners of Charities and Corrections have bought 1,000 acres of land in Suffolk County, Long Island, and it is hoped that before long about two-thirds of the insane on the Islands can be transferred to cottages on the Long Island farm.

HOW A RAILROAD DOCTORS ITS EMPLOYEES.—M. Gallard, in an argument in favor of the harmlessness of adding pure alcohol to wine, delivered before the Académie de Médecine, describes a novel method of wholesale doctoring. For more than twenty-five years the employees of the Orleans Railroad, to the number of 40,000, have been daily supplied by the company with an alcoholic mixture, to be used as a health beverage. The daily dose assigned to each person consists of alcohol, 44 grammes; tafia, 40 grammes; tincture of gentian, 4 grammes; water, 1 litre. This drink is served out for one hundred and fifty days, from May 1st to October 1st. Under its use the company has found the health of its employees to improve, and malarial troubles, which are the pest of the region, have especially diminished.

DR. WEIR MITCHELL has written a second novel.

AN INSTRUCTIVE CONTROL EXPERIMENT.—M. Duthil continues to report great success in the treatment of diphtheria by the use of vapors of turpentine and eucalyptus. He claims to have treated one hundred and thirty-four patients, with only eleven deaths. The method applied at the Children's Hospital in Paris, however, has given only deplorable results.

CHOLERA IN COREA.—The epidemic of cholera in Corea has assumed frightful proportions. It is said that the disease causes a thousand deaths daily in Seaoul, and has already swept away over a million of the inhabitants.

THE CONGRESS OF GERMAN NATURALISTS AND PHYSICIANS, whose annual meeting was held in Berlin lately, contains a membership of 2,224 persons, while the number of participants at the last meeting was 4,155. The work was done in thirty sections, of which the most active were that for Internal Medicine, and the least that for Pharmacology. There were one hundred and thirty-one sittings held. The most industrious sections were those of Pathology and of Physics, in which thirty-six and thirty-five papers, respectively, were read. The cost of entertaining the Congress was about fourteen thousand dollars. The next meeting is to be held at Wiesbaden, with Dr. Fresenius as President.

A RESIGNATION FROM THE INTERNATIONAL MEDICAL CONGRESS.—We are informed that Dr. E. Williams, of Cincinnati, has resigned the Presidency of the Section of Ophthalmology in the Washington Congress.—*Medical News.*

THE LATE DR. MCBRIDE was another illustration of the fact that doctors, even those having a large income, seldom accumulate money. Although Dr. McBride had a very large practice, from which he made fifteen or twenty thousand dollars annually, he died, it is said, in debt. His library and office equipment, however, are very valuable.

PROPRIETARY REMEDIES CAN BE CRITICISED.—The decision in the case of Dr. Carl Seiler, who was sued for condemning a proprietary medicine at a lecture before students, has been rendered, and it is a most important one. The *Philadelphia Medical Times* thus sums it up: "Two interesting points were made in the charge to the jury. In the first place, it was declared as the law of Pennsylvania that a scientific lecture before students or a Medical Association is not only privileged, but a highly privileged communication; that malice must be shown to exist in order to render the lecturer liable for an expression of opinion under such circumstances. Secondly, a druggist having been subpœnaed to bring some of Dr. Seiler's prescriptions into court, the Judge decided, without opening the question of ownership, that they could not be made public, as they were essentially confidential and private communications to the druggist. Judge Arnold also held that the plaintiff's attorney had no right to publish the weakness or maladies of patients of Dr. Seiler, and refused to allow him to examine the prescriptions."

DR. W. A. HAMMOND gave a dinner on Tuesday evening in honor of Dr. Althaus. Several representative medical gentlemen were present, and enjoyed a delightful evening.

SOUTH AFRICA has reached the point that it has a weekly medical journal, the *South African Medical Journal.*

A NEW AND SURE REMEDY FOR RATTLESNAKE BITES is put forward by Dr. H. C. F. Myer, of Pawnee City, Neb. It is the tincture of echinococca augustifolia, and has been used by him successfully in eight cases. Dr George C. Nichols, of Kansas City, reports in the *Kansas City Medical Index* a case successfully treated by this remedy.

DR. SALEM PASHA, physician to the Khédive of Egypt, attended the Congress of German Naturalists and Physicians at Berlin. Dr. Salem is said to be the leading Arabian physician in Egypt. He has translated Niemeyer's "Treatise on the Practice of Medicine" into Arabic.

SEVERAL OF OUR STATE BOARDS OF HEALTH are adopting the practice of issuing regular monthly bulletins, in which the sanitary condition of the State is reported upon as fully as can be, and various instructive articles upon hygiene, etc., of general interest, are incorporated. Minnesota and Tennessee have such bulletins.

MR. GLADSTONE is not a total-abstainer, but takes four glasses of claret and one of port daily. He consumes about seven gallons of alcohol yearly. M. de Flaix puts forward this and other facts as arguments against the present outcry against alcohol.

DR. FORDYCE BARKER gave a reception to Professor Winckel, the distinguished gynecologist of Munich, on Friday evening, October 15th. A large number of medical gentlemen from this and other cities were present to enjoy the refined hospitality of the host.

DR. N. S. DAVIS is an active worker in temperance circles, and for over thirty years has been prominent as a Methodist.

THE STATE BOARD OF HEALTH OF OHIO has issued an address to the medical profession of the State asking co-operation.

BELLEVUE HOSPITAL will, it is said, soon have a new system of ventilation, adopted at the cost of $20,000. The plan is to have a system of air-tubes supplied by fans which will be run by electricity.

COLLEGE CLASSES.—The colleges are getting settled as to number of students, for now is the time for the tickets to lectures to be paid for.

DISPENSARIES AND YOUNG DOCTORS.—The younger physicians about town are complaining again that the dispensaries and college clinics are robbing them of patients. The trouble appears to be that the professors who wish clinical material are even willing to pay patients to come to them rather than not at all. The time will come when the general practitioners who do not live by teaching will take pains to educate the people that dispensaries and colleges are not the best places in which to be treated. With the number of medical men who are willing to do their share of charity work in their offices it is safe to say that, if there were no dispensaries or college clinics in the city, none but the persons who are hunting for clinical material would suffer.

COCAINE HABIT.—A promising young surgeon of this city is an inmate of one of the neighboring insane asylums, a victim to the cocaine habit.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—The annual election of this Society takes place on Monday evening, October 25th, in the Hall of the New York Academy of Medicine. Drs. Laurence Johnson, F.R.S., Drake, and Andrew H. Smith, all good men, are candidates for the presidency.

A New Hospital on a New Plan.—A small hospital, called the Lodge and Association Hospital, has just been opened at St. Mark's Place, in this city. It is supported by annual contributions from different lodges and clubs, mostly German and Jewish. Members of subscribing lodges have a right to be admitted, when ill, and to be treated at the hospital by their own physician.

The late Dr. Frank H. Hamilton.—At a stated meeting of the New York County Medical Association, held October 18, 1886, the following resolutions, offered by the Vice-President, Dr. John Shrady, were adopted:

Whereas, It has pleased the Almighty Disposer of Events to remove from the sphere of his usefulness our much respected co-worker, Frank Hastings Hamilton, M.D., LL.D., and

Whereas, The New York County Medical Association desire to express a sense of their bereavement, in common with the many organizations with which he was connected; therefore, be it

Resolved, That the fulness of his days has been a record of a well-spent life; and that his work has adorned the surgical annals of America, and added to the solid contributions to medical literature.

Resolved, That as a scholar in his chosen science he has won a place among the worthies of all tongues; and that he has conscientiously weighed all his statements, and given to the world the results of a ripe experience and a most painstaking discrimination.

Resolved, That his professional life has been gauged by the strictest regard to the right; that his loyalty, ever unimpeached, was never expended upon the unworthy nor his unswerving rectitude ever challenged, even by the captious multitude.

Resolved, That the memory of his many virtues will ever linger with us, and that we tender to his family our sympathies, assuring them that his valued counsels have not been unappreciated by those who had the honor of association with him.

P. Brynberg Porter, M.D.,
Secretary.

Reviews and Notices.

A Manual of Practical Therapeutics, Considered with Reference to Articles of the Materia Medica. By Edward John Waring, C.I.E., M.D., Fellow of the Royal College of Physicians, London; Surgeon Major (Retired) in Her Majesty's Indian Army. Edited by Dudley W. Buxton, M.D., B.S., Lond., Member of the Royal College of Physicians; Assistant to the Professor of Medicine at University College, London, and Administrator of Anæsthetics at University College Hospital and the Dental Hospital of London. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1886.

Even if Waring's Therapeutics were a new work, we should welcome it to the already long list of treatises on general therapeutics on account of its intrinsic merits. But it is no novice seeking for recognition, but is rather an old veteran by whose counsels more than one generation of medical men have been helped and have been strengthened in the belief that there is some virtue in drugs after all, although the Nihilists would have us think otherwise. But though an old work, it is not antiquated, and in the successive editions which have followed each other in the past thirty-two years extensive changes have been made, to keep up with the rapid increase in the number of tried new remedies and of the new applications of old ones, and the present edition will be found fully up to date. A copious index of diseases adds not a little to the practical utility of the treatise.

A Treatise on the Practice of Medicine for the Use of Students and Practitioners of Medicine. By Roberts Bartholow, M.A., M.D., LL.D., Professor of Materia Medica, General Therapeutics, and Hygiene, in the Jefferson Medical College of Philadelphia, etc. Sixth edition, revised and enlarged. 8vo pp. 990. New York: D. Appleton & Co. 1886.

The sixth edition of Professor Bartholow's work has made its appearance, with many important additions. Enough has been said of the peculiar merits of this treatise to render unnecessary any detailed reiteration. Suffice it to say that, from a practical and clinical standpoint, it has few equals in its scope of subject and directness of statement. The author is an acute observer, an accomplished clinician, and a faithful therapeutist. In fact, his resources in the treatment of disease appear to be almost without limit. In these days of lack of faith in special remedies this is certainly a commendable virtue. The error is on the side of progression, and if the reader is not prepared to admit all the conclusions, he is certain to be benefited by the number of valuable suggestions which are offered in explanation of therapeutical effects. The author makes his convictions felt, and the most doubtful student is led to take fresh courage in treating the most desperate cases. There is nothing novel in the arrangement of the subjects, nor in the description of the phenomena of disease. The style is plain, terse, and perspicuous, and no space is wasted in useless discussion. On the whole, it still continues to be a very good book.

The Healing of Arteries after Ligature in Man and Animals. By J. Collins Warren, M.D., Assistant Professor of Surgery, Harvard University; Surgeon to the Massachusetts General Hospital; Member American Surgical Association; Honorary Fellow Philadelphia Academy of Surgery. 1 vol., pp. 184. Illustrated with thirteen full-page plates in black and colors. Parchment muslin binding. New York: William Wood & Co. 1886.

In these days of many books, when the itch of writing is raging as an epidemic, and when, as would be expected, most of the productions are merely compilations, it is refreshing to meet with a book such as this, which bears within it evidences of honest original work. Although the labors of others have been by no means overlooked, as a bibliography containing nearly two hundred and fifty references amply proves, yet the ground has been carefully gone over again by the author, and his conclusions are his own and based upon his own observations. The importance of the subject of the healing of arteries to every surgeon is self-evident, and nowhere is the subject more clearly and fully treated than in Dr. Warren's modest-appearing little work. There are chapters on the history of the ligature, on experiments on animals and on the human subject, and on the mode of closure of the fœtal vessels. Finally, in the appendix the author describes the methods employed by him in his investigations, and a very complete index closes the book. The plates are beautifully executed, and add greatly to the value of the work.

Anatomiske Termini fra det Norske Landsmaal. At Dr. I. O. Hennum. Kristiania: Det Steenske Bogtrykkeri. 1886.

This is a dictionary of anatomical terms in current use among the peasantry of the Scandinavian countries. It is doubtless of practical utility to physicians in those lands, and will also be of considerable value to students of comparative philology, as all dialectical glossaries are.

L'Année Médicale. Résumé des Progrès Réalisés dans les Sciences Médicales. Publié sous la direction du Docteur Bourneville. Paris: E. Plon, Nourrit et Cie. 1886.

This is the eighth appearance of this valuable annual. The volume contains abstracts of most of the important works and journal articles which have appeared during the year 1885. Especial reference is made to progress in microbiology and therapeutics.

Maladies des Organes Génitaux de la Femme. Par le Professeur Carl Schroeder. Ouvrage Traduit de l'Allemand sur la Sixième Édition par Dr. E. Lauwers et Dr. E. Hertoghe, Précédé d'une Préface par M. le Professeur Eug. Hubert. Bruxelles: A. Manceaux. 1886.

The work of Schroeder on the diseases of the female generative organs is too well known to require any extended notice. The author's method of treating his subject is simple, and his descriptions are clear and easily understood. The work is well illustrated with nearly 200 fairly executed woodcuts, and seems to have lost nothing in its change of language. The volume before us has acquired some interest by having gone to the bottom of the sea in the Oregon, but it has also suffered somewhat, physically, from its prolonged bath.

Vorlesungen über Pharmakologie für Aerzte und Studirende. Von Dr. C. Binz. I. Abtheilung, 1884; II. Abtheilung, 1885. Berlin: August Hirschwald. Lectures on Pharmacology for Practitioners and Students. By Dr. C. Binz.

This work contains the lectures on materia medica and therapeutics delivered in the University of Bonn by the well-known Professor Binz. The different drugs are taken up in order and discussed chiefly as regards their physiological action upon man and the lower animals, though the subjects of posology and the therapeutic application of remedies is by no means slighted. The treatise is a valuable addition to the literature of therapeutics, and we hope that an English translation will soon appear. The appearance of the third volume, which is promised for the present year, will complete the work.

Refraction and Accommodation of the Eye and their Anomalies. By E. Landolt, M.D., Paris. Translated under the Author's Supervision by C. M. Culver, M.A., M.D., formerly Clinical Assistant to the Author, Member of Albany Institute, N. Y. 8vo, pp. 597. Philadelphia: J. B. Lippincott Co. 1886.

Dr. Landolt, the well-known ophthalmologist, published some time ago a work in French (in parts) on the refraction and accommodation of the eye, which has just been translated into English by Dr. Culver. The author does not pretend to present it as a complete treatise upon all matters connected with the subjects indicated by the title, but the clinical element predominates in it. The work is divided into two parts, the theoretical and the clinical, and the author constantly reminds his readers of the bearing of theory upon practice, on both of which he is eminently qualified to dissertate. As a rule the theoretical portions, which are often necessarily rather intricate, are very plainly explained in the work, and are rendered available for those who are conversant with the higher mathematics. In several respects the author's theory and practice differ from those of other ophthalmologists. He takes the modern view that the amblyopia often met with in a squinting eye is primary and not secondary; and in performing tenotomy Dr. Landolt does not use a strabismus-hook, but raises the tendon by seizing it with forceps, and then passes one blade of the scissors beneath it. For paralyzing the accommodation of children, the employment of atropine in a solution of the strength of 1 part to 4,000 or 2,000 parts is recommended. The full correction of hypermetropia for distant vision is not recommended, even when the patient has diminished amplitude of accommodation. It is assumed that for a hypermetrope the constant use of two-thirds of his total accommodative power is the normal condition, and the correction both for near and distant vision is calculated upon this basis. Thus a hypermetrope of 5 D, having an amplitude of accommodation of 3 D, would be ordered 3 D (5—2) for distance; while for seeing at 33 centimetres (which would require a positive refraction of 8 D) he would be given 6 D (8—2). As regards myopia, Dr. Landolt enjoins the following rule: "A myope must be prohibited from wearing concave glasses for any distance at which he can see without using accommodation." This rule, however, is one that is not generally recommended by other ophthalmologists, but the author evidently attributes to accommodation an important part in causing an increase in the myopia. In this connection Dr. Landolt draws attention to a point which is certainly of importance, but which has never previously been noticed, and that is when, as in high myopia, objects are held very close to the eye, a very slight alteration in the distance necessitates a much greater change in the accommodative effort than is the case at greater distances. The work in its English dress forms a handsome volume, and the translation has been done in a clear style by Dr. C. M. Culver. The illustrations are numerous and excellent. The type and general style of the volume leave nothing to be desired.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, October 18, 1886.

Daniel Lewis, M.D., President, in the Chair.

TETANY AND TETANILLA.

Julius Althaus, M.D., M.R.C.P., London, England, read an exhaustive paper on the above subjects, in which he said that probably the disease had always existed, but had only recently been recognized. Tetany does not occur frequently, but is occasionally so severe as to lead to a fatal result. Tetanilla, a kindred complaint, was first recorded by Friedreich, under the name *paramyoclonus multiplex*, although Dr. Althaus had recognized the affection prior to Friedreich's article, and had given it the name tetanilla, which he still regarded as more euphonious than *paramyoclonus multiplex*.

Of tetany Dr. Althaus had seen ten cases—four in males and six in females. He then gave a short retrospect of the history of this disease, described first by Steinhein in 1830, and twelve months later by Dance, of France. The name tetany originated with Courvoisier. The clinical phenomena consist of a succession of attacks of tonic spasm, or rigidity of certain groups of muscles, mostly symmetrical, which follow one another at somewhat regular intervals, and are not accompanied with loss of consciousness, but with undue excitability of the motor nerves and muscles.

The chief causes are certain kinds of irritation acting upon an otherwise predisposed and enfeebled nervous system, such as persistent diarrhœa, half-starved condition of the children of the poor, obstinate constipation, intestinal entozoa, dentition (evidence not strong), irritation from diseases of the sexual organs in women, smallpox, typhoid fever, cholera, influence of wet and cold, etc.

It has been said to occur epidemically; probably these cases were either hysteria or cerebro-spinal meningitis. It has occurred after four cases of thyroidectomy, and this fact suggests a possible causal relation between these two facts worthy of consideration.

It has occurred most frequently between the ages of one and five years and ten and fifteen years, and females are rather more liable to it than are males.

A constitutional neurotic condition must be present in order that such causes as diarrhœa, cold, etc., may lead to an outbreak of tetany.

The evolution of the symptoms may be rapid, or more gradual. The premonitory symptoms are malaise, headache, dizziness, feeling of stiffness, and shooting pains in the limbs, slight rigidity or few twitches, and then the symptoms become gradually aggravated until the disease is fully developed. Both hands assume a peculiar position, not always the same; but in most instances the muscles supplied by the ulnar nerve suffer, bringing the hand into the conical shape adopted by the accoucheur. The position of the hand first described as belonging to this disease is not absolutely pathognomonic, but where spasm of the muscles supplied by the ulnar nerve is entirely wanting, the case is probably not one of tetany. Mostly there is symmetrical affection of both sides of the body. In a large number of cases the muscles of the extremities only are affected. The muscles of the face, neck, and trunk may become involved. A sudden impression of cold or heat may arrest the spasm, but it reappears as soon as these agents are withdrawn. The spasm can be produced by pressure upon the nerves and the arteries, quicker by pressure upon the vessel than by pressure upon the nerve. Faradic and galvanic excitability are much increased. Mechanical excitability of muscles and nerves is increased, but this is not always present, and it is sometimes present in other affections. There is loss of muscular power. Pain is sometimes experienced during an attack, and there is, generally, tenderness on percussion during an attack, particularly at the seventh cervical vertebra. Paræsthesia is occasionally present, but as frequently absent. The temperature may rise to 101° F., or more, in severe cases. In the majority of cases the secretions do not undergo any special change.

The duration of an attack is from a few minutes to half an hour; the attacks may occur at intervals, or they may be almost continuously.

The entire duration of the disease is rarely less than one month, and more commonly two or three months. Morbid anatomy has not furnished the precise nature of the change present. Dr. Althaus believes that tetany is a functional disease, produced by undue excitability of the giant cells in the gray matter of the anterior horn of the spinal cord. Why these cells should be particularly affected is inexplicable.

TETANILLA.

This affection occurs in neurotic subjects, frequently in those addicted to masturbation; occurs between the ages of fourteen and fifty-four years, and, so far, all his patients had been males, and, according to his experience, no particular exciting cause could be found.

It is a *clonic* convulsion, generally symmetrical, that ceases during sleep; does not impair motor power or co-ordination, and electro-excitability is normal, but reflex excitability is increased.

The *treatment of tetany* consists in building up the constitution of the patient, and the use of hydrate of chloral as a direct sedative. The iodide or the bromide of potassium in some cases is useful. For cutting short the paroxysm, which may threaten life by spasm of the respiratory muscles, the best remedy is the subcutaneous injection of pilocarpin.

The *treatment of tetanilla* is chiefly mental; allaying the fears of the patient with reference to the presence of progressive muscular atrophy and other diseases with which it has been confounded.

The discussion was opened by DR. W. A. HAMMOND, who had recognized only four cases; two in the army, one in Baltimore, and one since he had been in New York. He was inclined to think that tetany was very common in the army, and that many mild cases of what had been called tetanus were really cases of tetany. He could recall at least forty cases which were regarded as cases of tetanus, but in which the patients recovered, a fact that favored the belief that the disease was not true tetanus.

With regard to the differential diagnosis between tetanus and tetany, in his four cases tetany manifested itself in the extremities but never about the jaw; there was none of the epigastric distress present in tetanus, whether traumatic or idiopathic; the excessive excitability present in tetanus is absent in tetany; in tetany there is disturbance of sensibility, but in tetanus there is no pain except that produced by muscular contractions.

With regard to *morbid anatomy*, he was somewhat inclined to differ with Dr. Althaus, and would place the lesion in the antero-lateral columns and the posterior horns of gray matter.

To arrest the attack and cure the disease he recommended bromide of sodium, in a dose of one hundred grains to an adult, in half a tumbler of water, followed by a thirty-grain dose at the end of two or three hours, and these continued three times a day for a week, or even longer, if there was any evidence of tendency to muscular contraction.

With regard to tetanilla he had not had any experience. Doubtless it existed, but he had not recognized it.

DR. E. DARWIN HUDSON, JR., wished for more conclusive evidence that the disease called tetany was entitled to a distinct name, according to the writings of Trousseau, Hughlings-Jackson, Hilton-Fagge, and others, who had described the affection, although not by the symptoms given by Dr. Althaus. The cases were numerous which bore the description given by Trousseau and Jackson, but the lack of uniformity in the symptoms, he thought, would lead the general clinician to the opinion that the entity of the disease had not been established.

DR. C. HEITZMANN said that he had an opportunity to examine the specimens in Weiss' case mentioned by Dr. Althaus, and that the motor ganglion elements in the anterior horns contained vacuoles filled with serous liquid. Weiss had made the diagnosis of myelitis to which Dr. Heitzmann objected, and called it œdema, a theory that would seem to be sustained by the results obtained by Dr. Althaus in the use of pilocarpin. He was not satisfied with the theory of functional disturbance, and no one, so far as he knew, had ever placed the lesion which produces disturbance of the motor apparatus in the gray matter of the posterior horns.

DR. J. LEONARD CORNING regarded these cases, according to Trousseau's description, as merely cases of modified tetanus, and he had treated one by administering hypodermatic injections of the hydrochlorate of cocaine between the spinous processes of the eleventh and twelfth dorsal vertebræ, which diminished the excitability in a marked manner.

DR. JOHN C. PETERS thought that Dr. Althaus' paper would throw light upon the subject of tetanus; some of the cases of which that had recovered were probably tetany. Benefit might be expected from the use, not only of chloral, but gelsemium and acetate of lead in these lesser spasmodic affections.

DR. ALTHAUS said it was altogether probable that many cases of recovery from tetanus were really cases of tetany. He was very much surprised at the enormous dose of bromide of sodium recommended by Dr. Hammond, as he had been at some of the doses of iodide of potassium said to have been given to children in this city; and he was quite sure that such doses in England would lead to either imbecility or to death. He had been much interested concerning the vacuoles described by Dr. Heitzmann, and hoped that microscopical study might soon reveal the true nature of these pathologically obscure affections.

On motion of DR. WEBSTER the Society gave a unanimous vote of thanks to Dr. Althaus for his highly interesting and valuable paper.

The Society then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 13, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. FREEBORN, from *the Committee on Microscopy*, reported on the tumor presented by Dr. E. N. Liell at the meeting held June 4, 1886. The interior of the tumor was soft, and contained a calcareous mass measuring two by two and a half inches. Microscopically the tumor was found to be composed of fibrous tissue and smooth muscle-fibres. The ovary and Fallopian tubes attached were normal. The examination was made by Dr. F. Ferguson.

DR. H. MARION SIMS presented, in behalf of a candidate, a specimen of *carcinoma of the ovaries, intestine, and liver.*

THE PRESIDENT presented, in behalf of a candidate, a specimen of *cysto-sarcoma of the breast.*

CHRONIC DIFFUSE NEPHRITIS—CIRRHOTIC AND FATTY LIVER—SUDDEN DEATH.

DR. H. J. BOLDT presented the kidneys and liver taken from the body of a man, forty-five years of age, of whom it had been known that he had had chronic nephritis and cirrhosis of the liver at least eighteen months, yet had seldom been unable to work. Two weeks ago he began to drink spirits to excess. About nine o'clock on the morning of the 13th inst. he complained of colicky pains. An hour later the pulse was absent at the wrist, temperature subnormal, respiration fifteen, intellect clear. He died at twelve o'clock. There were no symptoms of uræmia. Autopsy revealed chronic diffuse nephritis, cirrhotic and fatty liver, and cardiac hypertrophy. The brain and the other organs were apparently normal.

DR. R. W. AMIDON presented a patient whose left leg exhibited

THE PECULIAR EPITHELIAL ULCER DUE TO THE PROLONGED USE OF THE BROMIDES IN LARGE DOSES.

The girl had been under his treatment for epilepsy for four years, during which time she took four or five grammes of bromide of potassium daily without the development of unpleasant symptoms. She then passed from under his care, and took about *six* grammes of mixed bromides daily for eighteen months; and when she returned, this peculiar lesion had invaded one leg and apparently was about to appear upon the other. This almost ulcerative lesion has not been described, except by A. Voisin in a monograph on the physiological and therapeutical effects of the bromides. It commences in a large-sized single acne spot, which takes on an apparently inflammatory process, with a large base, and afterward breaks down into what seems to be simple ulceration. About this ulcer there appear, in a circular form, vesicles, the contents of which become cloudy and purulent, and finally are covered with yellowish, dark-colored crusts. The centre of the affected surface takes on the reparative process and becomes healed, while the pathological process extends at the periphery sometimes to the distance of several centimetres. It may invade only one or both legs.

Microscopical examination has shown that it is not a true ulcer; for the process simply denudes the skin of its cuticle, with hypertrophic changes affecting the papillæ, but the true skin is not involved. The disease runs a slow and intractable course, and the only measure which seems to do much in way of arresting it is the thorough use of the actual cautery. Dr. Amidon exhibited photographs of two cases which he had seen before and had reported to the Society. Bumstead and Taylor's *serpiginous syphilide* describes the appearance of the lesion about as well as anything he had seen in writing.

DR. T. MITCHELL PRUDDEN presented four specimens which illustrated

DIFFERENT FORMS OF HEART-LESION IN ULCERATIVE ENDOCARDITIS.

The *first* was from a man, twenty-eight years of age, with a good previous history. After complaining for a few days of malaise and pain in the back, twenty-three days before his death, he was suddenly seized with a rigor, followed by intense headache and a continuous fever. Diarrhœa, lasting ten days, followed. He grew apathetic; there was pain and tenderness of the moderately distended abdomen, a little cough, headache, and sleeplessness. His temperature ranged irregularly from 98½° to 103⅘° F. A soft, blowing systolic bruit, at the apex, was developed sixteen days before his death, and five days before death a sound resembling a pericardial friction-sound was heard over the left ventricle.

At the autopsy there was marked congestion of the superficial cardiac vessels. One cusp of the aortic valve was much thickened, covered with thrombi and ulcerated at the edge, while at its base a necrotic area extended back into the heart-wall. No cultures were made in this case, but microscopical examination failed to reveal any bacteria in the heart-lesions. There were no other lesions of internal organs. This was apparently a case of *simple acute ulcerative endocarditis* without emboli.

The *second* specimen was the heart of a man who, some months before his last illness, had well-marked acute articular rheumatism, from which he apparently completely recovered. He was suddenly attacked with severe rigors, cough, pain on inspiration, and died, on the sixth day, of what seemed clinically to be acute lobar pneumonia on the right side.

The autopsy showed complete ordinary consolidation of the entire right lung. The edges of the mitral were a little thickened, as were the aortic valves. Each of the aortic cusps was perforated by a large rough-edged ulcer, from which hung voluminous ragged thrombi. There were no infarctions of internal organs and no other lesions. Microscopical examination failed to reveal bacteria, and careful cultures on gelatine-plates were made with negative results. This, then, was also a case of *simple ulcerative endocarditis* without embolic lesions; but it differed from the last in that there was old thickening of the valves, and the recent heart-lesion was associated with acute lobar pneumonia.

The *third* specimen was from a man, twenty-eight years of age, who, six months before his death, suffered from an attack of left hemiplegia, which, on account of his heart-murmurs, was supposed to be of embolic origin. After this attack he steadily improved, and was apparently nearly well when, two weeks before his death, purpuric spots appeared on his legs and he began to have obscure pains in his limbs. The next day, while sitting up in bed eating, he suddenly toppled over and became unconscious. He developed signs of right hemiplegia, and in this condition died. The heart was hypertrophied and dilated. The aortic cusps were all irregularly thickened by an old inflammatory process, and perforated by large ragged ulcers from which thrombi depended. One of these ragged cusps was partially calcified. There was a little roughening of the endocardium below the aortic valves, and a slight thickening. The lungs and liver were normal; the spleen was large and soft; while the kidneys showed, in moderate degree, the lesions of chronic diffuse nephritis. Brain: On the right side there was complete occlusion by obliterating endarteritis of two medium-sized branches of the middle cerebral artery, with softening and fatty degeneration of the corresponding area of brain-tissue. On the right side was an area of yellow softening, involving the island of Reil and the posterior portion of the opti-striate body. In the main trunk of the middle cerebral artery was a hard, irregular fragment of tissue, about two millimetres in diameter, which, on microscopical examination, proved to be a detached frag-

ment of one of the calcified aortic cusps. Neither by the culture method nor by morphological examination could any bacteria be detected in the heart-vegetations or thrombi. This, again, was evidently a case of *simple ulcerative endocarditis*, following a chronic thickening of the aortic valves, with non-infectious emboli, which were significant on account of their point of lodgment.

The *last* case, which would be reported in detail elsewhere, presented an entirely different phase of ulcerative endocarditis. A healthy girl, fourteen years of age, was operated on for club-foot, as was supposed antiseptically. She did well at first, but in about ten days developed pyæmic symptoms, and died thirteen days after the operation. The aortic and pulmonary valves were normal. The mitral and tricuspid valves were slightly thickened, and their edges closely beset with small irregular excrescences which rested upon ulcerated bases. There were small subendocardial petechiæ and small areas of superficial hemorrhage on the surface of the cerebrum. There were multiple abcesses of the kidney and infarctions of the spleen and liver. Enormous numbers of sphero-bacteria were found in the heart-vegetations, as well as in all the peripheral embolic lesions. Cultures were made from the heart-vegetations and from the renal abscesses, and the bacteria were thus identified as the staphylococcus pyogenes aureus, of which specimens in tubes and stained under the microscope were shown. This, then, was a case of true *malignant ulcerative endocarditis* complicating pyæmia. By the use of these bacteria, cultivated from this case, he induced the lesions of malignant ulcerative endocarditis in rabbits by the method of Wyssokowitsch. Of these rabbit-hearts he showed a series of specimens.

Dr. Prudden presented these four cases of human ulcerative endocarditis together, because he wished to emphasize the distinction which should be drawn between simple ulcerative and malignant ulcerative endocarditis. He thought that we should limit the term *malignant* to those cases in which bacteria are present as a causative factor. The specimens showed, furthermore, that the gross heart-lesion may be just as marked and extensive, or even more so, as in these cases, in the simple as in the malignant or mycotic form. He thought that there was a tendency among those who made autopsies to call all the cases in which there were marked ulceration and thrombosis of the valves malignant endocarditis, simply on account of their gross appearance. This was deception, as these specimens showed, and the true distinction between these etiologically entirely distinct lesions could usually be made only by a microscopical or, what was better, a microscopical in addition to a biological examination by the culture methods.

Dr. Van Santvoord presented a specimen which illustrated

MITRAL STENOSIS AND CARDIAC THROMBUS.

It was taken from the body of a boy, ten years and five months of age, who about two years ago had a mild attack of articular rheumatism. About eight weeks ago he became seriously ill, and was admitted to Randall's Island Hospital eighteen days before his death. When admitted he had general œdema, shortness of breath, double mitral murmur with marked purring thrill, and ecchymoses of the feet, hands, and legs. His scrotum was swollen, and ten days before his death it sloughed. During the period of sloughing the temperature was somewhat elevated, but for several days before death it was normal. There were petechial spots on different parts of the body, mostly of small size.

At the autopsy the brain was not examined. The heart showed marked narrowing of the mitral orifice—only half an inch long by one-eighth of an inch wide—the right auricle not materially dilated, but the endocardium thickened, and at the bottom was a thrombus which had softened and was evidently the source of the infection that gave rise to the petechial spots. On the right side both the auricle and the ventricle were considerably hypertrophied, and the auricle also contained a small thrombus. There were infarctions in the lungs, the liver was somewhat fatty, the spleen was normal, and the kidneys were those ordinarily seen with chronic heart disease.

The interest in the case centred in the symptoms. The diagnosis was ulcerative endocarditis, but the autopsy revealed the lesions described.

Dr. Frank Ferguson presented a specimen of

ULCERATIVE COLITIS, WITH ABSCESS OF THE LIVER,

removed from the body of a man, thirty-eight years of age, a German, married, and a salesman by occupation, who was admitted into New York Hospital September 22, 1886. He had just arrived from Maracaibo, and had been sick since twenty days prior to admission. His illness commenced as a profuse diarrhœa, which was attended with griping pain and soon followed by passage of blood with much tenesmus. He had not had any chilly feeling. He emaciated rapidly, had no vomiting, but suffered continuously from thirst.

On admission he complained chiefly of thirst. His temperature was 101° F. and pulse 110. He had fulness in the epigastric and hepatic regions, and the area of hepatic dulness was increased. He was slightly jaundiced. His voice was husky. His heart was weak. His mouth and pharynx were covered with an apparent false membrane, composed of epithelial cells, pus, blood-corpuscles, fibrin, and bacteria in large numbers. His urine was dark-colored, albuminous, and contained hyaline and epithelial casts.

The discharges from the bowels continued from eight to thirteen in number daily; his temperature ranged between 98° F. and 101.4° F., and he died on September 26th.

Dr. Ferguson also presented a specimen of

ANEURISM OF THE POSTERIOR BRANCH OF THE LEFT MIDDLE CEREBRAL ARTERY,

taken from the body of a man, thirty-eight years of age, a German, and a nurse by occupation, who was admitted to the New York Hospital September 20, 1886. He suddenly fell to the floor, at 8 A.M. of that date, had a unilateral convulsion—which side could not be ascertained—and became unconscious. Three hours afterward there was rigidity of the right side, both pupils were dilated—the right the most marked—and neither responded to light. His pulse was bounding, but of low tension, his breathing stertorous, his face flushed. From time to time clonic convulsions of the lower extremities occurred. He died at 11.10 P.M.

Dr. Ferguson also presented specimens which showed

THE PIGMENTED CONDITION OF THE ORGANS

in consequence of profound malarial poisoning. They were taken from the body of a man, forty-two years of age, a native of the United States and a sailor, who was admitted to the New York Hospital October 11, 1886. He had a well-marked alcoholic history. He had been subject to chills and fever, and had recently come from Pensacola. Six days ago he began to have chilly sensations, lost his appetite, and became very weak, which was the chief symptom complained of. He had no gastro-intestinal symptoms, backache, nor nose-bleed. Bowels rather constipated. Tongue became dry and cracked. On admission his temperature was 104° F., he was apathetic, and there was general pigmentation of the skin. The blood contained free pigment, and also pigment-granules in the white blood-corpuscles. His urine was albuminous, and was passed involuntarily. He died on the evening of the next day after admission. His temperature rose to 106° F. after death.

Autopsy.—Body emaciated; surface pigmented. Heart: valves competent, tissue dark-colored, muscle-cells granular, blood-vessels contained pigment. Lungs deeply

pigmented, congested, and very œdematous. Spleen five to six times its normal size, very friable, and very deeply pigmented. Kidneys darker colored than normal, hyperæmic, cortices swollen. Microscopically the epithelia of the convoluted tubes was abnormally granular; pigment was seen in the vessels, and hyaline and granular casts in the straight tubes. The liver was very deeply pigmented. The pigment was in the connective tissue, in the cells, and within the blood-vessels. The stomach was pigmented; its mucous membrane was thickened. The pancreas was very deeply pigmented; microscopic examination showed the pigment within the vessels, and not in the connective tissue or in the parenchyma of the organ. The suprarenal capsules were pigmented. The pigment was within the capillaries and cells of the cortex, and in the tissue of the medulla. The cortex of the brain was unusually dark and intensely hyperæmic; it was slightly softer than normal, and the vessels contained a great deal of pigment. The pigment was free in the lumen of the vessels. The vessels of the white substance contained as much pigment as those of the gray substance. Microscopic specimens were shown.

Dr. Robert Newman presented a

CYSTIC TUMOR OF THE SCALP,

freshly removed. It was nearly three inches in diameter, contained sebaceous matter, and had no special nutrient vessel.

Dr. Newman also presented

THE STUMP OF A NASAL POLYPUS,

interesting only with regard to treatment. The patient was a girl, aged twenty. The polypus filled the nasal cavity completely. It was first treated by torsion, and afterward by the use of the galvano-cautery. Finally, Jarvis' snare did what neither of these methods had been able to accomplish.

The Society then went into executive session.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, October 5, 1886.

The President, Charles L. Dana, M.D., in the Chair.

CASE OF CONGENITAL ABSENCE OF THE FACULTY OF CO-ORDINATION.

Dr. G. H. Hammond presented a boy, four years of age, brought to his clinic on account of inability to walk. He was born at full term; labor was natural; he appeared to be perfectly healthy at birth, but shortly afterward he became sick, and continued more or less ill for six months. The attending physician diagnosticated colic. Since recovery from this attack the patient had had no sickness. The special senses were normal; the patient understood as well as other children of his age. Perhaps he did not speak as plainly as he should, but the other children in the family, perfectly healthy, talked in the same manner. There was no history of syphilis. The patient was well formed; the muscles of the limbs were well developed for a child who did not walk; muscular reaction to both electric currents was normal. The reflexes were normal. The only apparent reason for his inability to walk was want of power to retain his equilibrium. He could crawl on his hands and knees perfectly well, unless he attempted to go very fast, when he would fall, and he always fell toward the right. He could stand, holding to a chair, and walk pretty well, if held upright. There was also inco-ordination in the upper extremities. He widened his base in standing. Dr. Hammond had not decided whether there was congenital absence of sensory tract in the cord, or cerebellar disease.

Dr. Julius Rudisch had seen two similar cases, both in girls, one about eight years old, and the other about thirteen. The first was seen some years ago, was under observation but a short time, and his recollection of the case was indistinct. But he was impressed with what he took to be muscular weakness, not simply ataxia, but weakness in the back. The child, if sustained, could walk well; if not sustained, it would fall like the boy presented by Dr. Hammond. The older patient could walk, but in a peculiar ataxic way, and in the position of marked lordosis. The legs were well developed, and for that reason he thought the trouble was in the muscles of the back. The cases were not, in his opinion, congenital locomotor ataxia.

Dr. N. E. Brill thought such cases were not uncommon, especially among idiots. Rumpf reported a similar case, and found a rudimentary cerebellum. Dr. Brill thought he had to distinguish in these cases between locomotor ataxia and static ataxia. Dr. Hammond's case appeared to be one of static ataxia, due to rudimentary cerebellum.

VESICO-GENITO-POST-FEMORAL NEURALGIA AND NEURITIS.

Dr. Landon Carter Gray read a paper in which he described two cases, seen during the year, of a peculiar variety of neuralgia and neuritis that had not, so far as he had been able to ascertain, been hitherto described. The first patient was a man, aged forty, good general health, but marked lithæmic temperament, subject every summer to quasi-malarial attacks. Hitherto his neuralgia had been gastric or intestinal. He escaped his usual attack this year until in July the temperature fell in one night forty-eight degrees Fahrenheit, and on the second day following, when getting out of bed, the patient felt a sharp, tingling pain through the buttocks, perineum, scrotum, tip of the penis, and down the back of both thighs to somewhat above the knee. Some slight smarting was felt in urination. Toward the afternoon the pain began to lessen, but became much worse again, following a Turkish and Russian bath. The cutaneous pains became violent, urination scalding, the bladder became paretic, the urine had to be forced into the urethra. For four days the temperature was from one hundred degrees in the morning to one hundred and two or three in the afternoon, the neuralgic symptoms still existing.

The second case was that of a female, aged thirty-five, seen in consultation with Dr. Burge on September 6th. During the past two years the patient had had a good deal of sciatica; otherwise had had good health. In December last she was suddenly attacked with sharp pain in the buttocks, perineum, labia, and down the back part of the thighs to the knees. There was simultaneous retention of urine, requiring the catheter. Several weeks later Dr. Burge saw the patient, and found tactile anæsthesia of the buttock, perineum, labia, and the back part of the thighs to just above the knee. Dr. Gray saw the patient nine months after the onset of the trouble. She then had vesical anæsthesia, and voided urine without her knowledge. Over the area just mentioned, except the labia, which he was not allowed to examine, he found impairment of the tactile, temperature, and pain senses, but slightly less marked near the knee than above. There had never been any motor impairment.

These cases had a clinical interest, because a knowledge that such a neuralgia might occur would make us chary about diagnosticating a central affection, as we might well be inclined in the early stage, especially when there was vesical, motor, or sensory paralysis.

Dr. William H. Thomson referred to the case of a woman from the country, a locality said by her physician to be free from malaria. After a prolonged convalescence from an attack of pleurisy she began to suffer severe pain in the anterior part of the left thigh and from slight trouble with the bladder, the pains coming on certain days of the week, lasting one day and two nights. This continued five months, when she was free until the following fall. The medicine prescribed by Dr. Thomson had not prevented a return of the singular symptoms again the present fall. There was no indication of sciatica.

DISCUSSION ON THE USES OF HYOSCYAMINE IN NEUROLOGICAL THERAPEUTICS.

THE PRESIDENT stated that there were two preparations of the drug, the crystalline and the amorphous. The former seemed to be similar in property to atropia, while the latter seemed to have hypnotic properties. He had employed hyoscyamine in paralysis agitans, in chorea, and in a few cases as a hypnotic, and it had been employed as a hypnotic to a considerable extent in his service at Bellevue Hospital. The number of cases of chorea in which he had used it was six; in three it was noted to have been of prompt benefit. One of the cases was chronic, and had not yielded to other treatment. In three cases the results were very doubtful. He had employed it in four cases of paralysis agitans—in two, he thought, with unquestionable benefit. In two it seemed to produce no benefit. On the whole he thought that, unless given at rather an early stage of paralysis agitans, it did no good. The form employed in chorea and paralysis agitans was the crystalline, but he was not sure that the amorphous form would not be the better preparation in such cases. He did not, on the whole, place a high value on the drug, and thought we could get along perhaps as well without as with it.

DR. B. SACHS' experience with hyoscyamine had not been very extensive, but he had employed it in a few cases of paralysis agitans, acute mania, and the insomnia accompanying the neurasthenic condition. He had employed only the crystalline form. In contradistinction to what the President had said, that it was best to give it in the early stage of paralysis agitans, he remembered one case in which every other therapeutic agent had been tried without success, when hyoscyamine was administered in about one-hundredth of a grain doses, twice a day, with the effect of making the patient very much more comfortable, and of diminishing somewhat the annoying movements of the hand. In another chronic case it had been of no benefit. He had obtained no effect from the drug administered to allay the excitement of acute mania. It had also been disappointing in insomnia accompanying neurasthenia. It seemed to be of more value against insomnia from mental restlessness.

DR. W. M. LESZYNSKY said that about eight years ago it was quite fashionable to use hyoscyamine in asylum practice, and he had employed it in chronic mania, acute mania, and epileptic forms of insanity. First he used the amorphous, and later, sulphate of hyoscyamine. It was claimed that the latter form was easier absorbed, and produced its effects in smaller doses. The sulphate was also preferred for hypodermatic use, in which manner he had employed it in one-sixtieth of a grain doses. To patients with recurring attacks of maniacal symptoms the drug was given a few days before an expected attack, and continued until the attack was aborted.

In a state of exhaustion he would regard hyoscyamine as a dangerous drug to administer, but where there was no objection to its use on that ground, he had known it to produce sleep where chloral and morphine had failed. Given to patients subject to epileptiform convulsions before menstruation, it seemed to avert the attack. He had given it in small doses in two or three cases of chorea, and thought it produced some benefit.

DR. L. C. GRAY had been using hyoscyamine ever since it had been introduced to the profession, and he must say that, for certain purposes, there was no drug in the pharmacopœia that he could not better afford to dispense with. The most convenient form was in tablets—one one-hundreth of a grain. In some people hyoscyamine would produce seemingly serious retention of urine. It might also produce disastrous results if given to persons whose general strength was below par. In an old gentleman, with atheromatous arteries, hypertrophied and feeble heart, one one-hundredth of a grain of hyoscyamine caused a condition of collapse. He knew of one patient suffering from melancholia who was sent to Greenwood by hyoscyamine. He had given it in two cases of chorea, one being an exceedingly violent case, the child finally dying in a convulsion. To that patient he could never give a second dose of hyoscyamine, because of the alarming prostration which a first dose would cause. In another case, in which the child had to be held in bed, the drug proved an effective means of restraint, but the child was always prostrated to a marked degree the next day. In paralysis agitans it had been very useful, and came to be with him a routine treatment. He thought the reason why it had been of more benefit in his practice was that he combined with it some stimulant or tonic to prevent its depressing effect. He gave with it good food, one or two grains of quinine a day, and sometimes alcoholic stimulants. He had satisfied himself that it was the hyoscyamine in this treatment which had a restraining effect upon the movements in paralysis agitans.

But it was especially in cases of mental trouble where hyoscyamine was of great benefit. In insanity with hallucinatory symptoms, especially in the early stage before the patient could be taken to an asylum, hyoscyamine would do much toward restraining the patient, and, it would seem, it aided in cutting short the disease. He was very careful to give no more of the drug than was absolutely necessary; and he combined it with bromide of potassium, which increased its effect. He had never seen hypnotic effect from hyoscyamine.

DR. WM. H. THOMSON said that his experience with hyoscyamine, almost from the beginning, rather prejudiced him against it. One of the first cases in which he employed it was that of a judge troubled with insomnia. The next day he was unable to hold court, had bladder symptoms, etc. He found it useful in asthma with considerable dilatation of the right side of the heart, without bronchitis, but a congested state of the lungs. He had employed it in facial neuralgia, headaches, and various neurasthenic conditions, but had nothing definite to say about its effects. One patient with paralysis agitans was benefited by it among many with whom it was a failure.

DR. T. H. KELLOGG had used hyoscyamine in cases of mental excitement, but it had not proven the sedative he had supposed it would; but it controlled muscular excitement. He had failed to get any hypnotic effect from it. He had not been favorably impressed with its after-effect in acute mania.

DR. H. S. HINKLEY had found it serviceable in allaying maniacal excitement. Dr. Waitzfelde, of the Pennsylvania Hospital for the Insane, had used hyoscyamide of bromine, and spoke very highly of it.

DR. RICHARDS had given five to seven drops of a one per cent. solution in several cases of insomnia, without effect.

THE MAN WITH FETID FEET.—The *Cincinnati Lancet-Clinic* asks, What woman is there who enjoys a tobacco-smoker's breath, or a husband with bromidrosis or fetid feet? Yet Louis XIV., according to Fragon, suffered from the latter to such a degree that the worst courtesans in Paris fainted away at the first whiff of his perfumed feet. Henry IV. had the same redolent perfume, but this did not prevent the diplomatic Queen Marguerite from occupying the same couch; and she pardoned her liege lord's legendary infidelities, as well as the loud smell of his royal toes. One day he was so redolent that Madame de Verneuil, one of his court favorites, said to him: "Sire, it is fortunate you are king; without that your presence would not be tolerated—you stink worse than carrion." A woman may passionately love a humpback, a cripple, a legless, or an armless man, but she can never love a man with a bad breath, or smelly feet, and we may remark *en passant* that the German army have hereditary bromidrosis, and its soldiers are obliged by law to use a deodorant powder of salicylic acid on their odorous, tyrannical feet.

Correspondence.

THE CHARLESTON MEDICAL RELIEF FUND.

To the Editor of The Medical Record.

SIR: It affords your Committee pleasure to state that the sum kindly contributed through you, amounting to $561, has been distributed *pro rata* to sixteen physicians and their families, who have either made application or have replied to our communication inviting a statement of their losses.

We have, in addition, distributed from a sum generously contributed by the ladies of Oil City, Pa., through Dr. J. A. Ritchie, that was forwarded to Dr. F. Peyre Porcher, and which was turned over by Dr. Porcher, by the permission of these ladies, to this Committee.

It is gratifying to your Committee, as it will also be to the generous and sympathizing donors of these contributions, to learn that many of their brethren in the profession have accepted and have received the aid which was so kindly and voluntarily proffered them.

With great esteem, yours respectfully,

MIDDLETON MICHEL, M.D.,
Chairman of Committee.

CHARLESTON, S. C., October 12, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 10 *to October* 16, 1886.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Grant, A. T., and there take station. S. O. 94, Department of Arizona, October 1, 1886.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. Ordered, on the expiration of his leave of absence, to report to the Commanding Officer at Fort Bidwell, Cal., for duty as Post-Surgeon. S. O. 93, Department of California, October 4, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 16, 1886.

WOOLVERTON, THEORON, Surgeon. Detached from the U. S. S. Shenandoah to proceed home and wait orders.

MEANS, V. C. B., Assistant Surgeon. Detached from the U. S. S. Shenandoah and ordered to Receiving Ship Independence.

PARKER, J. B., Surgeon. Detached from the U. S. Swatara to proceed home and wait orders.

SHAFER, JOSEPH, Assistant Surgeon. Detached from the U. S. S. Swatara to proceed home and wait orders.

SODIUM CHLORIDE AND GOUT.—Dr. Ferrán, of cholera-inoculation fame, has recently published an article on gout (*Revista de las Ciencias Médicas*), in which he insists upon the prejudicial effects of sodium salts in individuals predisposed to this affection. He says that the disease is most prevalent in cities on the sea-coast, and that persons sailing on vessels loaded with salt are very prone to gout. Alkaline waters are also injurious, in that they often bring on an attack, although the patient is afterward better for a time. He recommends nitrate of amyl by inhalation in the treatment of gout, in addition to the internal administration of the acetic extract of colchicum.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 16, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	57	15
Scarlet fever	16	3
Cerebro-spinal meningitis	1	1
Measles	95	8
Diphtheria	64	32
Small-pox	0	0
Yellow fever	0	0

THE LENOX MEDICAL AND SURGICAL SOCIETY is a private medical society organized a year ago, and now reported to be progressing. It meets on the second Monday of each month—Dr. W. A. Hume, President; Dr. J. Blake White, Vice-President; Dr. H. B. Conrad Secretary.

THE CHICAGO POLICLINIC.—We learn from its secretary that the Chicago Policlinic is not connected at all with the Chicago Ophthalmic College, as was intimated in our columns recently.

MISS HASTINGS, of England, aged one hundred and five, is the banner girl for recuperative power. At the age of a hundred and four she had a double pneumonia, from which she made a good recovery, according to Professor Humphrey, of Cambridge.

PROFESSOR CHARCOT is said to live in a superb mansion, the Palais Charcot, one quite worthy of royalty. "Troops of patients," writes a Vienna medical editor, "lay their offerings upon the table of his consultation room, so that he soon has a heap of gold before him." Charcot's fees are from four to thirty dollars.

WHAT BECOMES OF PANCREATIN?—It has been shown experimentally that pancreatin is always digested in gastric juice, hence its administration by the mouth can be of little use. M. Dufresne has, however, recently announced that pancreatin, on reaching the stomach, is absorbed into the blood as zymogen, and is again secreted by various glands as follows: 1, In the liver, where it becomes a diastase capable of turning glycogen into sugar; 2, in the salivary gland where it is secreted as ptyalin; 3, in the spleen, where it becomes a diastase which is carried to the pancreas and there secreted as the diastetic ferment of the pancreatic juice. How M. Dufresne arrived at these views we do not know, but they will be welcomed no doubt by the pharmacists who have invested so largely in the manufacture of pancreatic ferments.

THE COMPOSITION OF "CUTICURA."—The much-advertised cuticura ointment has been found to consist of petroleum jelly, colored green, perfumed with oil of bergamot, and containing two per cent. of carbolic acid.

TREATMENT OF ELEPHANTIASIS.—Dr. Neff had a case of elephantiasis in which the size of the legs was reduced one-half by the constant use of an ointment composed of nitrate of mercury ʒj., to vaseline ʒj., rubbed in well, and the wearing of rubber bandages on the feet and legs. —*College and Clinical Record.*

AN INTERNATIONAL COUNTY MEDICAL SOCIETY.—A society has been formed of the physicians in Brownsville, Tex., and Matamoras, Mex., and called the International County Medical Society. The president is Dr. McManus; vice-president, Dr. Cicero; secretary, Dr. Valls; treasurer, Dr. Combe.

POSTERIOR LUXATION OF THE EYELIDS IN A DOG.—Dr. Charles K. Cutter, of Charlestown, Mass., writes that a notice of a case of posterior luxation of the upper eyelid in a recent issue of THE MEDICAL RECORD reminds him of a similar accident occurring to a dog. Dr. Fuller owned a mastiff dog and a pug. One day the pug attempted to eat from the mastiff's dish, and the latter struck him a blow with his paw just over the left eye, which resulted in the complete protrusion of the eye from its socket, both lids slipping behind the globe. The owner was away from home at the time and did not return until six hours later. The lids were then pulled forward and the eye returned to its socket, and no damage to vision has resulted.

THE ADMINISTRATION OF COD-LIVER OIL.—Dr. W. Washburn, of New York City, writes that he has long been in the habit of administering cod-liver oil in milk to both infants and adults. Milk is taken in the mouth and held there, and the spoon is first dipped in milk and then the oil is poured into it. Just as the oil is taken into the mouth the milk should be swallowed, and then another sip of milk taken. Children, if interrupted in nursing, readily swallow a teaspoonful of oil and then proceed with nursing as if nothing had happened. The oily nature of the milk seems completely to shield the mucous membrane of the mouth and throat from contact with the cod-liver oil.

RESUSCITATION OF THE NEW-BORN—A REPLY TO DR. NOBLE.—Dr. J. S. Roberts writes that he has read the note of Dr. Noble in THE MEDICAL RECORD, claiming priority in the method of treating asphyxia of the new-born by suspension. The writer says that he had no intention of claiming priority for himself, but merely related his experience, which was confirmatory of that of Dr. Sharp. He had never seen any notice of Dr. Noble's method, although he is a regular reader of several medical journals, and his was a true discovery, made on December 7, 1885. He tried the method again in three other cases, each time with success, and then wrote an account of the same. He says, therefore, that he will leave the matter to Drs. Sharp and Noble to settle between themselves.

DR. H. C. DALTON has been appointed by the mayor of St. Louis superintendent of the City Hospital, to succeed the late superintendent, Dr. D. V. Dean.

SLEEPING IN THE WOODS.—In one of the German health-resorts, the *Allgemeine Medicinische Central-Zeitung* states, the experiment was tried this summer of having patients with pulmonary disorders sleep all night in the open air in the pine woods. The hammocks, used to rest in during the day, were provided with pillows and bed-clothing, and a party of five, two ladies and three men, spent their nights in the woods with no roof over their heads. The experiment was very successful, the patients slept better than they had been able to do in their rooms, and all declared themselves as feeling much more refreshed by their sleep than usual. It is proposed next summer to provide accommodation for a large number of patients in the forest, so that the experiment may be tried on a large scale.

ILLEGITIMACY IN PARIS.—The vital statistics of Paris show that twenty-eight per cent. of children born alive are illegitimate, while of still-born over thirty per cent. are illegitimate. Of the living children, however, a large number are legitimatized by the subsequent marriage of their parents, and the parents of a considerable proportion of the remainder are to all intents and purposes married, and would be so considered in most countries where the laws concerning marriage are less strict.

A REMEDY FOR HYDROPHOBIA.—Dr. Maldfinewitz, of Moscow, says that a decoction of the root of the meadow-sweet (Spiræa ulmaria, L.) is a remedy of great efficacy in the treatment of rabies in man.

TEST FOR BILE IN URINE.—A writer in the *National Druggist* directs attention to chloroform as a test for bile in the urine. It is ready, delicate, and certain. All that is necessary is to agitate a few drops of it in a test-tube, along with the suspected urine. If bile be present, the chloroform becomes turbid and acquires a yellowish hue, the depth of which is in proportion to the amount of bile present in the urine. If no bile be present, the test-fluid remains limpid.

BICYANIDE OF MERCURY FOR HYPODERMATIC USE.—The employment of bicyanide of mercury hypodermatically in the treatment of syphilis has met with great favor, not only on account of its efficiency, but because there is little or no tendency to the formation of abscesses. One great inconvenience attending its use is that it produces an intense local burning sensation, which is extremely painful and lasts for an hour or two. By combining cocaine muriate with it, Dr. Ohmann-Dumesnil states, this pain is either totally abolished or diminished to a great extent.

INCONGRUENCE OF THE RETINÆ is affirmed by Dr. A. D. Williams (*St. Louis Medical and Surgical Journal*) to be a frequent cause of squinting. Parts of the retinæ which physiologically ought to correspond do not do so, and consequently are not identical. The double vision thus caused is so confusing that it cannot long be tolerated, and one or the other eye is turned outward or inward so as to remedy the diplopia. In such cases the deformity can be greatly relieved by the usual operation, but binocular vision is impossible.

CALCULUS OF THE TONSIL.—At a meeting of the Beech-Fork Medical Society, in Lebanon, Ky., Dr. W. W. Ray reported a case of stone in the tonsil, in which he removed the concretions and then cauterized the crypts. Complete recovery followed the operation.

PERMANGANATE OF POTASSIUM IN AMENORRHŒA.—Dr. B. Marshall, writing in the *Therapeutic Gazette*, adds his testimony to that of others concerning the efficacy of potassium permanganate in amenorrhœa. He has found it to act with certainty in about seventy per cent. in selected cases. It may be given at any time, but preferably one or two hours after eating, as it is then not so apt to cause nausea. The writer did not find it more efficient when given before meals. Its disagreeable effect on the stomach is best relieved, he states, by a powder consisting of cocaine hydrochlorate gr. $\frac{1}{8}$, ipecac. gr. $\frac{1}{10}$, cerium oxalate gr. j., and bismuth subnitrate gr. v.

THE BRITISH MEDICAL ASSOCIATION AND ANGRY CRITICS.—The address of the president, Dr. Moore, and that of Dr. Billings seem to have stirred up considerable bad feeling in various parts of the world. A gentle correspondent has written a letter to Dr. Moore, in which she takes him roundly to task for his expressed views concerning women's work, and concludes with this horrid threat: "Therefore, before saying adieu, let me give you one piece of advice, which is that, in your future opposition to the progress of women, not at any rate to repeat the disgusting, and insulting, and ignorant remarks on my sex, or else you may, perhaps, find by bitter experience that, though women are, as you make them out to be, on a level with the beasts of the field, they may yet be capable of showing their resentment at being told so by administering a sound chastisement on the offender, even though he may occupy the important position of President of the British Medical Association, or of any other ridiculous and trumpery association." As for Dr. Billings, the papers of the Mississippi Valley have abused him with great unanimity, of which the following is but a tame illustration. After quoting a portion of his paper, one of our esteemed contemporaries says: "Why Billings should have singled out this great Valley (or any part of the country) to illustrate his tomfool notions of the alliance of malaria and ignorance, would be difficult to divine."

MALARIA IN HOBOKEN.—Board of Health reports say that 100 cases of malarial fever have been reported from West Hoboken, and that the disease is still spreading. The sewer that formerly carried the refuse of the district into the North River by way of Hoboken was broken some years ago. An act that gave permission to towns to build their own draining sewers has been repealed, and no action can be taken until it is re-enacted. Meanwhile, the putrid water and slush runs down Pavonia Hill in an open drain and empties itself into the meadows, where it lies on the surface, and the sun's rays cause continuous evaporation and putridity over a large area during the spring, summer, and autumn months.—*Sanitary Era.*

COCAINE IN TOOTH-EXTRACTION.—Professor Redard and his assistant, Dr. G. Andina, of the Geneva Dental School, have employed hydrochlorate of cocaine as a local anæsthetic in forty cases of tooth-extraction. They used a fifteen per cent. solution, injecting into the gum an average of fifty or seventy-five centigrammes of the alkaloid by means of an ordinary Pravaz's syringe. In all the cases, extraction, which was performed usually in ten minutes after the injection, was absolutely painless. No unpleasant accessory effects, except some nausea and heaviness of the head in young girls and children, were observed. The author's results, therefore, coincide with those published by Mrs. Helene Vongl-Sviderskara, of St. Petersburg (see the *London Medical Record*, July, 1886, p. 304), who, however, used far larger doses.—*British Medical Journal.*

THE PROPER USE OF ERGOT.—Dr. F. H. Porter gives the following rules for the administration of ergot in obstetrical practice, in a paper published in the *Buffalo Medical and Surgical Journal* for September, 1886: 1. Ergot is a drug which in any of its preparations tends to deteriorate rapidly, and should never be used excepting when prepared from a pure and fresh specimen. 2. It is a stimulant to the tubular and non-striated muscular structures of the body, causing them to contract. 3. It acts especially upon the muscular structure of the uterus, throwing it into a state of tonic spasm. 4. Its action on the uterus is, however, uncertain; sometimes it contracts the entire organ, at others only a small part of it. 5. If the entire organ is contracted, labor may be delayed through the rigidity of the os, and the child may be destroyed by the interference with the placental circulation. 6. Or the contractions may be so powerful as to force the child at once into the world, causing any or all of the lacerations of the soft parts of the mother. 7. The life of the child may be endangered also through absorption of the essential oil of ergot. 8. If given after the birth of the child and before the expulsion of the placenta and membranes, it may prevent the removal of the latter and thus be indirectly a cause of puerperal septicæmia. 9. It may act in a similar manner in cases of abortion, actual or threatened, and cause a similar result. 10. The proper use of ergot in obstetrical practice is limited to those cases in which, after the expulsion of the placenta, the uterus refuses to contract, or, having once contracted, shows a tendency to secondary relaxation. Even in these cases, however, reliance should not be placed upon it alone, but its action should be supplemented by the other means used to provoke uterine contractions.

DEFECTS OF HEARING AMONG RAILROAD EMPLOYEES.—Dr. Lichtenberg reported at the recent Congress of German Naturalists and Physicians, that he had examined 250 railroad employees and found defective hearing in 92, or 36.8 per cent. The defect was due to aural catarrh, disease of the labyrinth, or affections of the external auditory canal. As many of the signals on railroads are made by whistling or bell-ringing, the speaker thought that the existence of affections of the ear in the employees was a matter of considerable moment as regards the safety of the travelling public.

THE RESULTS OF RAILWAY INJURIES.—At a recent meeting of the Chicago Medical Society, Dr. A. V. Park read a paper on railway injuries, in which he presented the following conclusions as the result of his observations in this class of cases: 1. Sloughing is the rule in contusions and lacerations. 2. Hemorrhage may be little, but is apt to be great in injuries to the head or extremities where large vessels are lacerated. 3. Examination of wounds should be thorough, and is best done during period of shock. 4. Shock may be excessive and death ensue rapidly, or reaction take place slowly with symptoms of collapse. 5. Amputations are attended by high rate of mortality, owing to liability of the stump being attacked by erysipelas, osteomyelitis, sloughing, or pyæmia ensuing. 6. Erysipelas may ensue rapidly and must be manfully combatted. 7. A large majority of persons injured by railway accidents recover but partially. The sequelæ may be paralysis, insanity, loss of memory, impaired vision, deafness, etc. These results may follow immediately, or may not appear until months or years after the injuries were inflicted.

LONG FASTS.—Considerable interest has been manifested in Italy in the doings of a certain Signor Succi, who professes to have discovered a liquor a small quantity of which will enable a man to fast for thirty days, or even for two months, at a time. One of the most singular features of his fasting is said to be that, though he loses weight, the flesh becoming somewhat mummified and the skin reddish in hue, while his pupils are dilated, yet his muscular force does not seem to be diminished. Signor Succi has just concluded a fast of some weeks' duration, and it is now stated that he has been offered $30,000 if he will begin another fast of still greater length. It is probable that the plant which he claims to have discovered, the juice of which is possessed of such wonderful virtue, is something of the nature of coca in its tonic properties. The Italian Tanner has not yet, however, shown any greater powers of endurance than his American predecessor, who was supposed to have taken nothing stronger than water during his exhibition in this city. The Medico-Chirurgical Society of Bologna has proposed to make Succi a subject of special study, examining the fæces and urine, but he would not consent, so that he is probably something of a fraud. These fasters had a predecessor in the fourteenth century, who was accustomed to observe Lent so strictly that for the forty-six days he took no food and only occasionally a little water. Such an example of piety naturally attracted considerable attention among the faithful in Venice, where the man lived, and he was accordingly put under surveillance by the ecclesiastical authorities. In a royal chronicle, quoted by the *Annali Universali di Medicina e Chirurgia*, it is stated that he was shut up by the Bishop and closely watched by the Venetian authorities and the officers of the Inquisition, in order to make sure that the fast was a genuine one. More fortunate than another supposed faster of modern times, he survived the ordeal, and proved to the satisfaction of the authorities that he was no pious fraud. "But when his fast was over," the chronicle states, "he ate immoderately." The writer gives the faster, Paulozzo by name, the title of *homo simplex et bonus*, which would, perhaps, be a little too flattering a term to apply to his successors of the nineteenth century.

TRACHEOTOMY FOR HEMOPTYSIS.—Dr. Lucius Spengler recently performed tracheotomy in a case of profuse hemoptysis occurring in a phthisical subject (*Correspondenzblatt für Schweizer Aerzte*). The patient was nearly dead from suffocation when the trachea was opened and the blood removed by aspiration. The operation was successful as regarded the averting of immediate death, but the patient succumbed five days later from suppurative inflammation of the mediastinum starting from the tracheal wound.

MICA-SPECTACLES TO PROTECT THE EYES AGAINST HEAT.—Dr. G. C. Simmons recommends the use of spectacles with plates of mica for persons, such as cooks, who suffer from conjunctivitis through exposure to heat.

NAPHTHALINE IN CYSTITIS.—At the last meeting of the French Association, at Nancy, M. de Pezzer spoke of the use of naphthaline in the treatment of genito-urinary diseases. It had been used by Rossbach, in 1884, in doses of one and a half grammes to prevent intestinal putrefaction, and he has found in urinary troubles that the results are just as satisfactory. When the urine was fetid and there was difficulty in micturition the dose used was one gramme divided into twenty-five centigramme pills; but the eructations were found to be very disagreeable with this mode of preparation, and capsules of gluten were then substituted, with great benefit. Oil of turpentine had been tried, but it failed in several cases which subsequently improved under naphthaline. In all the cases where the urine was cloudy, purulent, alkaline, or full of microbes, it became limpid, neutral, or acid, after the remedy was given, while the quantity of pus, if any had been present, decidedly diminished or entirely disappeared. In cystitis or pyelo-nephritis, and in the many cases of old urinary diseases that so often occupy the beds in surgical wards for years, great improvement was found, and entirely without any digestive troubles; nor does it produce any increase in the acts of urination. Administration by the mouth was found to be preferable to injections.

THE CHOLERA IN HUNGARY.—In the latter part of the summer a number of cases of supposed cholera nostras were reported from Buda-Pesth and other parts of Hungary, but as the disease persisted and fresh cases were constantly being reported, an investigation was made which resulted in establishing the fact that the disease was true Asiatic cholera. This discovery has given rise to considerable apprehension in Vienna, and every effort has been made to improve the sanitary condition of the city.

THE STUDY OF LEPROSY IN THE SANDWICH ISLANDS.—Dr. Arning has recently returned to Germany from the Sandwich Islands, whither he had gone in the spring of 1883, at the request of the Hawaian government, to study the leprosy which is so prevalent in these islands. He had been quite successful in his investigations, and proposed to pursue his studies still longer, but owing to some disagreement with the authorities he abandoned the project and returned to Germany.

GRASS STAGGERS.—Perhaps some of our Western readers can say whether the account given below is a correct one. "A weed called 'loco' has of late years," says a writer on cow-boys in Texas in the September number of the *Cornhill Magazine*, "largely increased in some of the cattle ranges of Texas and the Indian Territory, owing probably to an increase in the rainfall. . . During the summer, when the prairie is a fair expanse of waving grass, both horses and cattle instinctively avoid it, but when, in the fall of the year, the grass becomes scarce in overstocked regions, and when all around assumes a brown and burnt-up appearance, it stands out conspicuously and temptingly green, its long, soft, velvety leaves rising in a bunch from six inches to a foot off the ground. Then the hungry creatures begin by nibbling suspiciously and stealthily at the seductive plant, but very soon become reckless, and greedily devour all that comes in their way. And now, if the mania cannot be nipped by a sufficiency of good, strong food, the animal is doomed, for he has become a confirmed 'loco-eater.' He will rapidly become thin, and lose all control over his movements; he will be subject to frequent fits, during which he lies on the ground groaning and foaming at the mouth; he throws himself about without reason; rears up or runs round in small circles when you attempt to mount him; his eyes turn dull and stupid; in short, he gives you the impression of being bereft of his senses. Specimens of 'loco' have been subjected to analysis by experts in Washington and in Edinburgh, but without anything injurious being discovered in it. It is possible that some minute animalculæ may be the cause of the mischief, but up to the present its disastrous effects only are known, for this pernicious weed causes periodically the death of thousands of horses and cattle."

STUDENTS IN GERMANY.—The number of students in the nine Prussian universities, during the summer semester just passed, was 13,106, as opposed to 12,823 in 1885, and 12,548 in 1884. Of this number, in 1886, there were 3,767 medical students. The greatest number (1,175) were in Berlin, then followed in order Greifswald, Breslau, Bonn, Marburg, Königsberg, Kiel, and Göttingen.

THE WOMEN'S HOSPITAL IN BOMBAY was formally opened by the Governor of Bombay, Lord Reay, on July 30th. The corner-stone of the building was laid in the fall of 1883, by the Duke of Connaught. The hospital, known as the Cama Hospital, is managed entirely by women. The first house physicians are Drs. Edith Pechey and Charlotte Ellaby.

THE UNITING OF SEVERAL DIGITS.—Dr. William P. Souther, of Worcester, Mass., writes to the *Boston Medical and Surgical Journal* as follows: "The following case is unique in my practice and may interest your readers. A young man in a neighboring factory had a finger cut off by a large paper-cutter. He brought the exsanguinated piece to me wrapped up in his handkerchief. It was three-fourths of an inch long, and included the nail and perhaps half an inch of the last phalanx. With little expectation of success, I adjusted the amputated piece to the stump, and now, after ten days, it is firmly adherent, the renewed circulation showing plainly at the finger tip. Perhaps you can inform me whether such an experience is common."

EMBALMING DEAD BODIES.—Dr. H. R. Tilton, Surgeon, United States Army, writes from San Francisco that he has read the request of Dr. Kennedy for information as to the best, simplest, and most ready method of preserving dead bodies. He has tried the Wickersheimer formula, and says that it is an impracticable method, at least for the general practitioner. "There is too small an amount of antiseptic material in the Wickersheimer formula to hold out any promise of success. It is impracticable for the average country practitioner to complete the process, by immersing the body, after injection, in a solution, and then enclose it in an air-tight case. Fortunately, this is entirely unnecessary. The following formula will preserve the body, if the injection is properly done: Take of the solution of chloride of zinc (U. S. Ph.), one gallon; solution of chloride of sodium, six ounces to the pint of water, six pints; solution of bichloride of mercury, one ounce to the pint of water, four pints; alcohol, four pints; carbolic acid (pure), one-half pint; carbolic acid dissolved in glycerine, one and a half pint. Mix all the ingredients and a clear solution of three gallons results, which is the proper amount for a body weighing one hundred and fifty pounds. The solution may be injected into the aorta, but it is much less trouble to inject into the brachial or femoral artery, or the femoral vein may be selected. If an artery is used, the injection should be toward the capillaries, and if a vein, toward the heart. To satisfactorily inject a subject a good anatomical syringe is desirable, but a gravity syringe can be improvised with rubber-tubing, a stop-cock, and a terminal glass tube with the tip drawn to a fine point. I would suggest to Dr. K—— that he experiment on a few animals, and then he can devise a formula to suit himself. I have found that a fluid drachm of the solution recommended is sufficient for each ounce of weight of the animal to be preserved. For preserving human bodies, two and a half fluid ounces for each pound is a safe estimate."

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BOSTON CITY HOSPITAL

Original Articles.

PULMONARY EMPHYSEMA.[1]

BY FRANCIS DELAFIELD, M.D.,

NEW YORK.

MR. PRESIDENT AND GENTLEMEN: If we look over the text-books of medicine most in use at the present time, we find the subject of emphysema treated of somewhat as follows:

There are two main varieties: the interlobular and the vesicular. Vesicular emphysema is subdivided into the substantive, vicarious, senile, and acute forms.

Lesions.—In all the varieties of vesicular emphysema the characteristic lesion is a dilatation of the air-vesicles. This dilatation goes on until the walls of the vesicles are ruptured, and so a number of vesicles join to form a common cavity. At the same time there is atrophy and obliteration of the capillary blood-vessels. Chronic bronchitis, venous congestion of the other viscera, and hypertrophy of the right ventricle of the heart are frequently associated lesions.

Causation.—The dilatation of the vesicles is due principally to mechanical causes, such as the obstruction of the bronchi by inflammatory products, forcible expiration by playing on wind instruments, etc.; in a lesser degree by some error of nutrition in the walls of the vesicles.

The affection is often hereditary. Those who suffer from it are less liable than others to phthisis and to pneumonia.

Symptoms.—The disease is characterized by labored breathing, by attacks of asthma, by the symptoms of chronic bronchitis, by venous congestion of different parts of the body.

The development of the disease is slow and gradual, and it but seldom proves fatal.

The contours of the thorax are changed, and it assumes the barrel shape. Percussion elicits an abnormally intense resonance of vesiculo-tympanitic quality. The inspiratory murmur is shortened, and the expiratory lengthened. Sibilant and sonorous râles are present, according to the intensity of the bronchitis. The treatment is to be directed principally to the bronchitis and the attacks of asthma.

This short statement, I believe, represents about the ideas of a medical student concerning emphysema at the time when he graduates.

Sooner or later after graduation he begins to find that these ideas do not correspond with what he observes. He finds that compensating and senile emphysema are not matters of much practical importance, but that substantive emphysema is, and that it is a very common and a very serious disease. If he has the opportunity of making autopsies, he finds that the dilatation of the air-vesicles is not always in proportion to the severity of the symptoms, and he begins to wonder whether such a dilatation is really an essential part of the disease. If he injects the blood-vessels of the lungs artificially he finds that he can get a very perfect injection, and does not see exactly where the obliteration of the capillaries can be.

He notices that very few of his patients have played on wind instruments, and that many have not had bronchitis, and he doubts whether expiration and inspiration theories were worthy of having been committed to memory.

That many of the cases are hereditary seems to him plain enough, but the immunity from phthisis and pneumonia is hardly all that could be desired.

Barrel-shaped chests do not present themselves as often as he had expected. Exaggerated vesiculo-tympanitic resonance is not as constant as it ought to be. The chronic bronchitis and the attacks of asthma he sees often enough, but he is occasionally puzzled by cases which seem to be cases of emphysema and yet have not the symptoms which he had believed to be characteristic of the disease.

As he goes on in his experiences he naturally consults his elders in the profession. To his surprise he finds that many of them have gone through the same experience as himself, and that each one, as a matter of practice, has an altogether different conception of substantive emphysema from the classical descriptions of the disease.

It seems to me that it is worth while to abandon the traditional descriptions of emphysema, and to state fairly what we do, and what we do not, know about the disease.

If we consider all the cases of vesicular emphysema, as we see them in practice and in the dead-house, they divide themselves naturally into the three classes, for which we will still use the old names of senile, compensating, and substantive emphysema.

Senile emphysema is of common occurrence, although not of great clinical importance. It seems to be simply a senile change in the parenchyma of the lungs. The walls of the vesicles are thinned, their cavities are dilated, they may rupture into each other. There is, however, no obstruction to the passage of blood through the lungs, no dilatation of the right ventricle of the heart.

This condition, when well developed, gives the loud vesiculo-tympanitic percussion-note said to be characteristic of emphysema.

There is no marked dyspnœa. Chronic bronchitis is often present. The disease has no decided effect on the general health.

I believe that in some persons substantive emphysema is first developed, and then, as they grow older, this is modified by senile changes into something resembling senile emphysema.

It is not always easy, during the life of the patient, to distinguish between senile and substantive emphysema, especially as chronic bronchitis may be present with both; and yet the distinction is an important one, for substantive emphysema is a serious matter, and senile emphysema is not.

Compensating emphysema, instead of involving both lungs symmetrically, involves one lung or part of a lung. We see it most frequently with phthisis, and with the compression of the lung following pleurisy.

In some of the cases the change in the lung seems to be simply an hypertrophy of the lung. In others there is a dilatation of air-vesicles and a thinning of their walls as in senile emphysema. In still others, the emphysema, although it may seem to compensate for the destruction or obliteration of lung tissue, is yet really a substantive emphysema.

The disease of the lungs commonly called *substantive*

[1] A paper read before the Academy of Medicine, October 21, 1886.

emphysema is a form of chronic inflammation of the lungs —a pneumonia; and the dilatation of the air-vesicles is a mere result of this inflammation and not the essential lesion of the disease. The inflammation is of the same type as that which so often attacks the endocardium, the inner coat of the arteries, the liver, and the kidneys; a chronic inflammation attended with the production of new fibrous tissue, and at the same time with atrophy and disappearance of normal tissue.

The walls of the air-vesicles and of the air-passages are the parts of the lungs first involved in the inflammation. These walls are in some parts of the lungs thickened, in others thinned. Where the walls are thinned, there is apt to be dilatation. Such a dilatation affects the air-passages rather than the air-vesicles, and may be confined to the former. The degree of the dilatation varies very much in the different cases, it is not in relation to the severity of the symptoms, and the disease may go on to its fatal termination with hardly any dilatation. I do not mean that the condition of the lungs is not made worse by the dilatation, it unquestionably is; but on the other hand most of the symptoms of emphysema may be present, and the disease prove fatal, with but very little dilatation. In fact, I believe that many cases of emphysema are overlooked at autopsies because no dilatation of the air-spaces is visible to the naked eye.

In addition to the thickening of the walls of the air-spaces, and the dilatation of their cavities, we find in some lungs little holes in these walls. These little holes are formed in the spaces enclosed by the capillary blood-vessels. They are found both at the periphery and at the centre of the vesicular walls, usually several of them in a single vesicle. Some of them are very minute, others attain a considerable size. Their edges are sharp cut, and not degenerated. They are found as well in vesicles of normal size as in those which are dilated.

Although these changes in the air-spaces constitute the essential lesion of substantive emphysema, yet the inflammation, as a rule, extends and involves other parts of the lungs. The epithelial cells which line the air-spaces are increased in size and number. The mucous membrane of the bronchi becomes the seat of catarrhal inflammation.

The disposition to the formation of new connective tissue becomes more marked, so that the walls of the air-spaces are very much thickened, and their cavities deformed and obliterated; the septa between the lobules, the walls of the bronchi and of the blood-vessels, and the pulmonary pleura are all thickened, and very frequently there are extensive pleuritic adhesions, so that the entire lesion assumes the form of a well-marked interstitial pneumonia.

In the milder cases of emphysema there is no disturbance of the circulation of the blood, but in the severer cases such a disturbance of the circulation becomes the worst feature of the disease.

This disturbance of the circulation seems evidently to be due to some obstruction to the passage of blood through the lungs, for the right ventricle of the heart becomes dilated and hypertrophied, and venous congestion of the viscera and skin, and dropsy are established.

It has been said that the obstruction to the passage of the blood through the lungs is due to the dilatation of the air-spaces and the obliteration of the capillaries in their walls. This explanation certainly cannot be true for all the cases, for we find the most marked evidences of general venous congestion in cases in which the dilatation of the air-spaces is trifling, and a complete artificial injection of the blood-vessels can be easily made after death.

I believe that in a large number of cases the obstruction is due not to structural changes, but to a contraction of the smaller arteries, which exists during life and disappears after death.

The secondary lesions of emphysema are the same as those of valvular disease of the heart—chronic congestion of the pia mater, stomach, and small intestine, liver, spleen, and kidneys, and dropsy.

The complicating lesions are the atrophic form of chronic nephritis, chronic endocarditis, and chronic endarteritis, chronic miliary tuberculosis, and cirrhosis of the liver.

The disease is, in New York, one of the every-day diseases; it is of very common occurrence.

It is apt to begin in persons between the ages of forty and forty-five.

Hereditary influences are well marked. In general, one may say that the same causes which lead to the development of chronic endocarditis, chronic endarteritis, cirrhosis of the liver, and chronic nephritis, also lead to the development of substantive emphysema.

Symptoms.—In observing the cases of emphysema clinically, it is evident that the patients in whom the disease is but moderately developed are much more numerous than those in whom it is at its worst; and it is also evident that it is more important to recognize the moderate cases than the bad ones; for the moderate cases are to be benefited by treatment, the bad ones are not.

Physical signs.—In the lesser degrees of emphysema there is no change in the shape of the thorax. In the more advanced cases there is a prominence of the sternum and costal cartilages. In the very bad and old cases this deformation of the thorax may be developed until it reaches the so-called "barrel shape." The hypertrophy of the muscles which move the thorax, contrasting with the general emaciation, are also noticeable in the bad cases.

The pulmonary resonance may remain unaltered for a considerable length of time. When it is changed, the change is either to a rather dull note of wooden quality, or to exaggerated resonance of either vesicular or vesiculo-tympanitic quality.

The respiratory murmur is feeble, or there is feeble inspiration with longer, louder, low-pitched expiration, or both the inspiration and expiration may be exaggerated, loud, and high-pitched.

Bronchitis, when present, adds its sibilant and sonorous breathing and râles.

Rational symptoms.—There are many persons in whom substantive emphysema is developed and continuous for years without giving rise to any rational symptoms, and yet, even in such persons, it is often possible to be pretty sure of the presence of the disease, because they are persons whose general physical condition and age are such as are usually associated with emphysema.

There are other persons in whom the associated Bright's disease, or cardiac disease, give such marked symptoms that the emphysema passes unnoticed.

Of the regular cases dyspnœa is one of the most marked features. A dyspnœa at first only developed by exertion; later more constant, made worse even by slight exertion, by indigestion, and by attacks of bronchitis. At its worst, the dyspnœa is constant and most distressing; even in repose the patients have to make unnatural muscular efforts to satisfy the need for air. It is, I think, a question of importance, how much of this dyspnœa is due to the condition of the lung-tissue and the bronchi, and how much to the contraction of the pulmonary blood-vessels.

The complicating bronchitis gives rise to a variety of symptoms—cough and expectoration, hæmoptyses, a febrile movement, and night sweats.

General venous congestion is gradually developed—cyanosis of the skin, congestion of the stomach, liver, and kidneys, and general dropsy.

The nutrition of the patients suffers, they become emaciated, feeble, and anæmic.

The ordinary courses of the disease are somewhat as follows:

1. Some patients for years have a winter cough, with expectoration of mucus and sometimes of a little blood.

They are always a little short of breath when they exert themselves. After a time they have attacks of spasmodic asthma. Then the dyspnœa on exertion becomes more constant and more decided; the patients lose flesh and strength, venous congestion is established, dropsy, and death.

2. Other patients are fairly well, except when they have attacks of acute bronchitis.

Such attacks may be mild, lasting a few days or a few weeks, with cough, mucous expectoration, sometimes hæmoptyses, asthmatic breathing, a febrile movement.

Or the attacks may be severe and last for two or three months, and in addition to the symptoms just mentioned they develop venous congestion, albuminuria, and dropsy.

3. In some patients there is a history of attacks of spasmodic asthma for a number of years before the symptoms of emphysema make their appearance.

4. In some patients the evidences of emphysema are very slight for a long time. Then, rather suddenly, constant dyspnœa and venous congestion are developed, and the patients die in a few months. Or in the same sudden way they develop uræmic attacks like those of Bright's disease.

The behavior of the disease is very much like that of the atrophic form of chronic Bright's disease. A slow inflammation which gradually changes the structure of the affected organs. The organs, however, continue to perform their functions moderately well until their structure is a good deal changed, and in addition disturbances of the circulation of the blood are established. Then, either gradually or with a sort of explosion, the decided symptoms of the disease make their appearance.

Treatment.—There are only two points in the treatment of the disease to which I wish to call attention.

1. It seems probable that the same rules as to climate, diet, and mode of life, which apparently delay or arrest the progress of other inflammations of the same class, may have the same effect on the progress of emphysema. And it is almost as important a matter to delay the progress of emphysema as that of Bright's disease.

2. It is a question whether a large part of the dyspnœa on exertion, and some of the asthmatic attacks, are not due principally to a contraction of the small arteries of the lung. If this is the case we should expect that those drugs which dilate the arteries and capillaries would relieve the dyspnœa, and as a matter of fact, many of the drugs which are most efficacious in controlling the dyspnœa do belong to this class.

The views concerning substantive emphysema which I wish to urge on your attention, therefore, are these:

1. It is not a local chronic disease due to rarefaction of pulmonary tissue and dilatation of air-sacs, but a chronic inflammation of the lung.

2. It is not due to excess of inspired air over expired air, nor to fatty degeneration, nor is the dilatation of the air-spaces the essential part of the lesion; but the result of the inflammation is such an irregular thickening and thinning of the walls of air-spaces as would naturally be followed by the dilatation of some of them.

That excessive bodily exertion may render the dilatation greater than it would otherwise be seems probable. Just as in aneurisms of the aorta, we must have first the disease of the wall of the vessel, and then the excessive muscular exertion to produce the dilatation.

3. That the dyspnœa and the general venous congestion are not due to the dilatation of the air-spaces, nor to the obliteration of capillaries, but rather to a contraction of the pulmonary blood-vessels.

4. That the indications for treatment are to delay the progress of the chronic inflammation, and to overcome the contraction of the blood-vessels, as well as to care for the bronchitis.

THAT belladonna often cures sterility is the statement which has been made by several writers recently.

CARLSBAD, FROM A MEDICAL STANDPOINT BASED UPON PERSONAL EXPERIENCE.[1]

BY R. C. M. PAGE, M.D.,

PROFESSOR OF GENERAL MEDICINE AND DISEASES OF THE CHEST IN THE NEW YORK POLYCLINIC; AND ATTENDING PHYSICIAN, DISEASES OF THE CHEST, NORTHWESTERN DISPENSARY, NEW YORK CITY.

IN view of the fact that Carlsbad is annually represented by a considerable number of American visitors, which is becoming larger every season, it may not be inappropriate to present a brief account of that justly celebrated watering-place, from a medical standpoint based upon personal experience. Information possessing no special medical value, but which might prove very useful to both physician and patient, may be found in the various guide-books. Of these the cheapest, and perhaps best, is a small pamphlet, entitled "Guide to Carlsbad," officially edited under the authority of the Mayor and Town Council (Aug. Siegle, 30 Lime Street, London, E. C.; Trübner & Co., Ludgate Hill, London, E. C.).

Carlsbad, Eger County, Bohemia, is situated 1,150 feet above sea-level, in a narrow, winding valley, with high hill-ranges on each side, and containing about 12,000 inhabitants. Through the middle swiftly runs an open creek, the Tepl Fluss (warm river), walled up on each side and bridged over at convenient crossings. It receives sewage from the town, but owing to the flushing of its channel from sudden rises to which it is subject after rains, the odor arising from it is not noticeably offensive except in prolonged dry seasons. Owing to the location in a bottom, the carbonic acid that collects between the hill-ranges naturally settles down on the town, producing, especially in foggy weather, more or less headache and depression of spirits, and aggravating cough and dyspnœa in those subject to bronchial affections.[2] For this reason, patients liable to such ailments should be directed to secure lodgings, if possible, on the more elevated localities of the Schlossberg.

Out-door life is the rule, few of the hotels having a dining-room or general sitting-room (one has the luxury of an elevator). Visitors secure their rooms and take meals at the various restaurants. North and west winds prevail, and the climate is subject to sudden and often violent changes. For this reason visitors should always have ready their overcoats and wraps, to put on or take off as occasion demands.

The official season commences May 1st, and ends October 1st, although patients are received there at all times of the year. July, perhaps, is one of the most popular months. The number of visitors in 1885 was 27,911,[3] "not including tourists and excursionists, and people making short stay for business purposes; of these 753 came from England and 735 from America." There is reason to believe that a much larger number of Americans visited Carlsbad during the past season of 1886 than in any previous year.

It is presumed that those who order their patients to Carlsbad have first informed themselves as to what physician will be employed upon their arrival; otherwise they will be forced to inquire of the hotel portier, or some friend who has been directed in that manner, which of the fifty-six practitioners in Carlsbad they should consult. The law, it is true, requires an alphabetical list of the names of all the physicians, with their addresses and office hours, to be placed in a conspicuous place in every hotel, but more definite information may be obtained from the Kurliste. Here are given the colleges from which they graduated, and the positions they hold, if any. Information on this point can doubtless be also had from leading physicians in such medical centres as Vienna, Berlin, and the like.

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[1] Read before the Section of Practice of Medicine, New York Academy of Medicine, October 19, 1886.

[2] Ziemssen: Handbook of General Therapeutics, vol. iv., p. 11. William Wood & Co., New York, 1885.

[3] Official Guide.

The treatment usually consists in, (1) a preparatory course of hygiene, which the patient is supposed to undergo before arriving; (2) the cure, which lasts usually four weeks, and includes drinking the waters, bathing, and hygiene (diet and exercise); (3) the after-cure, consisting chiefly in a gradual and prudent increase of diet after leaving Carlsbad, if necessary, and return by degrees to healthy occupation. The cure is a matter of routine in many cases, but it should never be undertaken without the advice of a physician, no matter how often the patient may have been to Carlsbad, or what the condition was upon leaving home. Changes may occur during the journey, and even while remaining at Carlsbad, that would utterly contra-indicate the cure. Hence, also, the necessity for repeated examinations during the cure, which may develop some weak spot before unsuspected.

The springs at Carlsbad, seventeen in number, are of the alkaline saline variety, and are all similarly constituted, their chief difference being in the temperature. The most popular, perhaps, are the Sprudel, which is also one of the warmest, 162.5° F.; Neubrunn, 137.75° F.; Mühlbrunn, 126.5° F.; Schlossbrunn, 122° F.; and Marktbrunn, 119.3° F.[1] and so on down to the lowest, 85° F. These figures are somewhat lower than those mentioned in the official guide,[2] which puts the Sprudel at 165° F., and the Felsenquelle, also a popular spring, at 141° F. According to Göttl's analysis,[3] 16 ounces of Sprudel water contain 45.8340 grains of solid constituents, as follows: sulphate of soda, 19.9606; carbonate of soda, 9.0624; chloride of sodium, 8.7245; and all other solid constituents, 8.0865 grains, as follows: sulphate of potash, 0.3696; carbonate of lime, 2.0198; carbonate of magnesia, 0.3994; carbonate of protoxide of iron, 0.0307; phosphate of alumina, 0.2150; and silica, 1.0520. It is seen, therefore, that the chief solid constituents are, respectively, sulphate of soda (Glauber salt), carbonate of soda, and chloride of sodium. All the springs contain free carbonic acid, the cooler more than the warm. The Sprudel, for instance, contains only 7.8033 cubic inches of carbonic acid gas in 16 ounces of water, while the proportion in the Schlossbrunn water is 17.3767 cubic inches.

In the Kurhaus and other bathing establishments, mineral (water) baths of required temperature are readily prepared from water conveyed by pipes provided with stop-cocks for hot and cold. Mud-baths (moorbäde) are also prepared by mixing the water with earth containing the sulphate of iron, and brought there from Franzenbad, some thirty miles distant. Physicians and their families, also clergymen, I believe, have the privilege of these baths free of charge.

Space allows only a brief mention of that part of the cure relating to diet. In general, starchy food, sweets, butter, fats and gravies, salads, pickles, condiments, and the like, are prohibited. Also alcoholic beverages, particularly champagne and Rhine wines, although a moderate amount at dinner of claret, or a glass or two of Madeira or sherry, may be allowed to the aged and infirm, or those in the habit of drinking. Ice-water is also forbidden, and in place of it is used the Gieshübler, an excellent table-water that comes from the Gieshübler simple acidulous spring in the neighborhood. Tea is generally used instead of coffee, with little or no sugar in either, especially in cases of gout or uric-acid diathesis. Eggs are poached or soft-boiled. Bread is thoroughly roasted in slices, called rusks or zwiebacks, besides which at dinner is allowed in most cases a moderate amount of untoasted bread made up with or without butter (Kaiserbrod, Wasserbrod). Fish, except salmon, which is thought to contain too much oil, and such meats as roast beef or mutton, beef-steak, mutton-chops, and poultry without dressing, are allowed in moderate quantities. Also, green vegetables, such as string-beans, spinach, cauliflower, and cabbage.

Included in the cure is exercise of some sort, chiefly walking. For this purpose a variety of delightful walks have been constructed and are kept in thorough repair. In this respect, and in the thorough system used regarding all the factors of the cure, managers of many of our American watering-places would do well to take lessons from their Bohemian friends across the water.

At the expiration of the cure the average patient will have lost somewhat in weight, and experiences a certain amount of a feeling of debility. These conditions will be marked in proportion to the severity of the treatment, as sometimes occurs, especially when patients take upon themselves the responsibility of directing their own cure, ordering baths at a temperature higher than is necessary or prudent, and taking them too frequently; drinking excessive quantities of waters from various springs; overfatiguing themselves with walking; and not eating a sufficient quantity of such diet as is even allowed. Such a reckless abuse of the cure is not without danger of producing organic change in some important organ, especially in those past middle life.

Let us now examine the three factors of the cure more in detail.

First, with regard to drinking the waters. According to Leichtenstern,[1] the old idea that the effects of mineral waters were the joint result of all the numerous constituents has no longer any supporters. One or a few of these constituents determine the character of a spring and its therapeutic action. Hence only the chief constituents of the Carlsbad water need be examined, which, as already stated, are the sulphate of soda (Glauber salt), carbonate of soda, and the chloride of sodium.

Artificially prepared Carlsbad salts,[2] when taken in warm water, act very much in the same way as the natural Carlsbad water. But, according to Harnack,[3] the so-called natural Carlsbad Sprudel salts, manufactured from the Sprudel water under the Carlsbad civic authorities, are practically nothing more than Glauber salt (99.33 per cent.), which is very much cheaper. It appears that the sulphate of soda crystals, forming first and having a fine appearance, are collected, while the carbonate of soda and chloride of sodium are thrown away in the mother-lye.

The sulphate of soda is purgative, and it also, according to Seegen,[4] increases the consumption of fat—which effect, according to Voit, has not been proved. The carbonate of soda is decomposed by the gastric acids, forming the chloride of sodium and setting free carbonic acid. The alkali, chloride of sodium, and the carbonic acid all tend to increase the secretion of gastric juice, as has been proved by experiments made with stomachs having fistulæ. They all excite peristaltic action, especially when taken cold. The chloride of sodium in addition, favors the formation and absorption of peptone, and is also diuretic. According to Leichtenstern, it also promotes the circulation of fluids through pathological products and favors their absorption. Hence its theoretical indication in various exudations and hyperplasias.

Cold water quickly leaves the stomach, and, stimulating peristalsis besides diluting the contents of the alimentary canal, is aperient; while warm water, being quickly absorbed, is diuretic, and may even constipate, though it contains some slightly aperient salts.[5]

While, therefore, the general action of the Carlsbad water is both purgative and diuretic, the former effect is better produced by the cooler springs, the latter by the warmer ones. Indeed, when constipation is marked, a glass or two of cooled Sprudel water may be taken at

[1] Spas of Europe, by Julius Althaus, M.D., M.R.C.P., p. 345. London, 1862.
[2] Op. cit., p. 15.
[3] Althaus, op. cit., p. 346.

[1] Ziemssen, op. cit., p. 335.
[2] Sulphate of soda, 0.50; carbonate of soda, 0.20; chloride of sodium, 0.10 (Leichtenstern.)
[3] Ziemssen, op. cit., p. 440.
[4] Handbuch der Allgemeinen und Speciellen Heilquellenlehre. Vienna, 1862.
[5] Ziemssen, op. cit., p. 334.

bedtime. Seegen [1] regards the waters as laxative, not purgative, especially the first few days, and states that they are not diuretic in the true sense, as the solid ingredients of the urine are not proportionately increased. As digestion does not take place in alkaline gastric juice, the waters should not be drank near meal-times, but preferably before breakfast, the last glass being taken at least an hour before eating.

We can now form some idea of indications for drinking the Carlsbad waters. They are useful in gastric catarrh with acid stomachs, and for washing out collections of mucus, as in the stomachs of high livers, gluttons, tipplers, and topers. By increasing peristaltic action and facilitating the flow of blood through the liver, they are, according to Leichtenstern, serviceable even in chronic gastro-intestinal hyperæmia and catarrh dependent on anatomical changes in the liver. Hence they are valuable in many liver affections, such as cirrhosis, venous hyperæmia, and obstruction of bile-ducts from various causes, hæmorrhoids due to portal obstruction, fatty liver, and the like.

Their curative effects in catarrhal jaundice depend on the favorable influence they exert on catarrh of the duodenum, and removal of obstacles to the flow of bile caused by the swollen mucous membrane. The waters have no specific effect on the bile itself, but merely render it thinner and more abundant, and increase its flow as any other water would do.

According to Leichtenstern, it has been often proved "that saline soda-waters, in public and private practice, as well as at renowned watering-places, assist in the removal of gall-stones." By some this is attributed to the dissolving power of the water, which is supposed to saponify the cholesterine so that the stone breaks up into detritus, though supposed alkalescence of the bile produced by the waters has not been proved. Moreover, those stones which have a covering of carbonate of lime cannot be thus affected. Seegen [2] states that the method of cure in these cases is not known, and favors the idea of the waters being preventive rather than curative, and agrees with Leichtenstern in the opinion that, owing to the increased flow and pressure of bile and increased activity of the gall-bladder, due to general reflex peristalsis, a cure is effected by expulsion of the stones instead of their being dissolved.

The loss of fat by patients cannot be accounted for by drinking the waters, except from their purgative effect, which cuts short, so to speak, complete digestion and absorption of the ingesta. The loss is due more to the use of hot baths, as we shall see, but chiefly to the diet and exercise.

In gout, the so-called uric-acid diathesis with or without dependent catarrh of the pelves of the kidneys, bladder, and urethra, renal calculi, and the like, it is a matter of common experience that all alkaline waters, including those of Carlsbad, are beneficial by lessening the irritation caused by the acid, but chiefly, according to Leichtenstern, by their washing out that which stagnates in the tissues and joints, their oxidation of uric acid into urea in the body having no proof.

Regarding diabetes mellitus, authors differ as to the effects of drinking the Carlsbad waters. Alkaline remedies in the treatment of this disease were introduced by Willis. About fifty years ago Mialhe employed them because he supposed that they would accelerate the decomposition and combustion of sugar in the organism,[3] and hence the supposed therapeutical value of the Carlsbad, Vichy, and other alkaline waters in this disease. Braun [4] states that not only in cases of lesser, but greater, diabetes has he observed improvement and a check to the progress of the disease effected by the Carlsbad waters. Seegen [1] observed in twenty cases, including both forms of the disease, that the symptoms in all were alleviated, the glycosuria remaining at a minimum during forty-six weeks. But the results were not lasting, although some remained in fair health for a number of years, even on a mixed diet. On the other hand, Leichtenstern [2] states that improvement or cure in these cases is due rather to strict attention to anti-diabetic diet and other concurring incidents of a bath cure than to the drinking of the waters. P. Guttmann, Riess, Külz, and others have shown by a long series of experiments on several patients that the use of the Carlsbad water has not the least power of diminishing the amount of sugar in the urine in diabetes mellitus. "I have been myself, for many years," says Leichtenstern,[3] "convinced of the uselessness of Carlsbad waters in diabetes, and have confined their use to cases only where it was an object to overcome obstipation or stomach disorders." Such in brief are some of the principal diseases in which the Carlsbad waters are usually indicated.

Secondly, with regard to the Carlsbad baths. Speaking in general, baths (fifteen to twenty-five minutes) at the point of thermal indifference (93.2°–95° F.), approximating the temperature of the body, cause no change in the production or giving off of heat from the body, and have little or no effect on the heart or circulation, but are beneficial in certain diseases, as chronic rheumatism, in connection with the rest of the cure. Hot baths, however, which increase the temperature of the body, cause proportionately redness of the skin, increased frequency of the heart's action and respirations, increased consumption of oxygen and exhalation of carbonic acid, the conversion of fat, and decomposition of the constituents of the body containing nitrogen, with corresponding increase of urea in the urine. These changes are produced by reflex action through the nervous system, and occur in baths of indifferent thermal waters (those in which are found a very small amount of solid or gaseous constituents—as Teplitz, Gastein, and probably the Virginia and Arkansas Hot Springs—and differing from artificially warmed simple water not in effect but in the mode of heating only), as well as those containing salts and gas like the Carlsbad springs. The presence of salts or gas in a bath may slightly stimulate the skin, but are not contained in sufficient quantity in natural mineral waters to materially alter the above-mentioned effects; nor has it been proved, though subjected to innumerable experiments, that the healthy skin absorbs substances contained in a bath except they be volatile or corrosive.[4] This being the case, it is not exactly known why the Carlsbad mud-baths should be made especially of earth containing sulphate of iron and brought there from Franzensbad. It cannot be because the iron is absorbed through the skin, nor does it appear to possess appreciably corrosive qualities. It is, however, free from animal and vegetable substances, and is very readily washed off. For these reasons it is to be preferred to some other materials for making a pultaceous bath. Owing to their warmth, pressure, and friction, thus stimulating the skin and peripheral circulation more than the mineral (water) baths, according to Seegen,[5] they favor more the absorption of exudates, and relieve abdominal congestion. Braun [6] states it as a clinical fact, though unsupported by any rational theory, that the mud-baths do not over-excite so easily as other warm baths, this being the only difference. Applied locally they are simply warm poultices.

If the increased conversion of fats and albuminates produced by hot baths would extend itself to similar substances contained in pathological products, to a relatively greater degree than they exist in healthy organisms, their therapeutic value could easily be estimated. Such effects, however, have not been proved.[7] But, ac-

[1] Op. cit., p. 358.
[2] Op. cit., p. 364.
[3] Reynolds' System, vol. iii., p. 611. H. C. Lea's Son & Co., Philadelphia, 1880.
[4] Curative Effects of Baths and Waters, p. 340. Edited by Herman Weber, M.D., F.R.C.P. London, 1875.

[1] Op. cit., p. 365.
[2] Ziemssen, op. cit., p. 363.
[3] Ziemssen, op. cit., p. 363.
[4] Ziemssen, op. cit., p. 237 *et al.*
[5] Op. cit., p. 369.
[6] Op. cit., p. 297.
[7] Ziemssen, op. cit., p. 276.

cording to Leichtenstern,[1] it has been shown by multiplied experience that the products and residue of chronic inflammation and hyperplasia of tissue can be favorably influenced by warm baths, even of indifferent temperature, when supported by a corresponding change in diet, mode of life, bodily exercise, and the use of laxative and other mineral waters. Hence good results are often obtained from their use in the treatment of chronic rheumatism of the joints and muscles, false anchyloses, effects of previous attacks of gout, prostatitis from gonorrhœa, or instrumentation for stricture, and the like. Pains in the lower extremities, however, dependent on unsuspected stricture of the urethra, and resembling rheumatism, should not be mistaken for the latter, as they may be treated with much better and more permanent results by properly treating the stricture, in connection with the cure or not, as the case may require.

Thirdly, the hygienic elements of the cure, especially with reference to diet and exercise. "Although these are recommended," says Leichtenstern, "by every careful physician in his daily practice, often with good results, it is a fact well known that there are those whose occupation and habits do not admit of this treatment." Hence the necessity for their removal from injuriously-working home influences, for rest and freedom from professional work, residence in a new neighborhood, change of climate, increased bodily exercise, and a judiciously changed mode of life and diet, "since the use of the cure at the place and site of the spring usually leads the most incorrigible sinners at table to a little self-respect."

Let us now look at some of the contra-indications of the Carlsbad cure. In cardiac diseases in general, for obvious reasons. In cases of gastric catarrh with dilated stomach, the more so if there be pyloric obstruction, since fermentation of gastric contents would still more dilate the stomach. In gastric catarrh and dyspepsias of the anæmic, which are attended by deficiency of acid in the gastric juice. Small children should not be taken to Carlsbad, as croup and diphtheria prevail there in winter, and sometimes attack the children of visitors in summer. Owing to the tissue-changing and more or less devitalizing effects of the cure in general, it is contra-indicated in the cases of patients having any disorganizing or wasting disease, as carcinoma, pulmonary consumption, or those who have inherited a strong predisposition to such diseases; debilitated, anæmic, and infirm persons in general, even women at the menopause; and, finally, Bright's disease of the kidneys.

During the month of July last, while on a visit to Carlsbad, I met the late Dr. Thomas Alexander McBride, of this city. Though but slightly acquainted with him, I took the liberty of calling on him at his rooms at the Westminster Hotel. I then learned for the first time that he had albuminuria and gouty kidney. I at once urgently suggested to him the danger of remaining at Carlsbad, the more so as the weather during the season had been unusually bad. But he stated that the albuminuria was only temporary, and believed that he would be benefited by the cure. I was shocked, a few weeks later, to read of his death, from uræmic coma on board ship, but I was not wholly unprepared for it.

In conclusion I would say: 1. There are patients affected with certain diseases who may be benefited, and even cured, by the Carlsbad course. 2. This benefit or cure should not be attributed to the drinking of the waters, the baths, or the hygiene alone, but to all of these factors combined. 3. If such patients would follow out the same hygienic rules at home, there would be no necessity of their going to Carlsbad, since the mineral waters and baths identical in effect may be obtained elsewhere. "Nor are there facts or reasonable grounds," says Leichtenstern, "for believing that a mineral water used systematically at home is less efficacious than at the spring under the eye of the bath physician." 4. There are patients who will not, do not, and cannot, observe such hygienic rules, and must therefore be sent to Carlsbad or some other place, where the concurring incidents of a cure and the pressure of surrounding circumstances will be likely to cause them to do so. Moreover, the benefits or disadvantages of an ocean voyage are to be considered, and the preferences of patients, other things being equal. 5. There are patients affected with certain diseases for whom the cure would be dangerous, if not fatal.

There are many other questions involved in the subject of hydro-therapeutics, pharmaco-dynamics, and hygiene (diet and exercise), in connection with Carlsbad and watering-places in general, which want of space prevents being brought forward. If I succeed, however, by this brief allusion to a vast and growing subject, in calling the attention of the profession to an earnest and intelligent consideration of the question as to what patients may be sent to Carlsbad, if any, with due precautions against the reckless abuse of the cure, and of the importance of discriminating between them and such as should not be permitted to go there, my object will have been accomplished.

31 West Thirty-third Street, October 19, 1886.

[1] Ziemssen, op. cit., p. 338.

NOTES ON THE CLIMATIC AND SANITARY CONDITIONS OF SOUTHERN CALIFORNIA.[1]

By W. M. CHAMBERLAIN, M.D.,

NEW YORK,

CONSULTING PHYSICIAN TO CHARITY HOSPITAL, ETC.

The increase and the diffusion of wealth, the extension of railroads, and the greatly increased comfort of travel, have made us a travelling people.

For pleasure or for health, a great multitude are moving in all directions over our vast territory. Fine hotels and sanitaria are multiplying at an equal rate. Such are found, distant from each other by only a few hours' travel, all along the Atlantic coast from Mount Desert to St. Augustine; all along the pine forests and sandy plains from Lakewood to Thomasville; and all along the mountain ridges from the Adirondacks to Asheville and Marietta. The slopes and parks of the Rocky Mountains in Colorado and New Mexico are as well provided, and even the far-off waters of Puget Sound are set with hotels which compare very well with the finest of the Catskills.

Notably within the last few years this tide of travel has turned toward California, and during the last winter the southern part of that State was fairly inundated by it. For two months the Southern Pacific Railroad alone brought to Colton an average of more than a thousand west-bound tourists daily.

There are five completed transcontinental railways now in operation, and two more in progress of construction; and there is good reason to think that the Pacific slope will be colonized and occupied at a rate more rapid than heretofore.

The city of Los Angeles, which in 1880 had a population of 14,000, claims now to have 42,000; and a similar, if less marked, increase is seen at several other points.

The writer spent five months of the last winter in California, travelled several hundred miles by wagon through some of its less frequented regions, and was greatly interested in the physical and social conditions there observed.

It was very evident that by far the largest portion of the travellers came from the prairie States of the West and Northwest. From Chicago, Milwaukee, St. Paul, Minneapolis, Omaha, Lincoln, Kansas City, and the country about these towns, there seemed to be a veritable exodus.

The motive was to escape from the long, harsh winter,

[1] Read before the Section of Practice of Medicine, New York Academy of Medicine, October 19, 1886.

from the snows and the fierce winds, and the mud, which there enforce a long imprisonment on all those of feeble vitality or impaired health.

And the general result seemed to be a delighted abandonment to the pleasures of an open-air life, amid novel and beautiful scenery, with unrestricted locomotion. The man from Winnipeg made haste to lay aside his furs on New-Year's Day, and to roll in the breakers on the beach at Santa Monica; and the girl from Duluth delighted to ride or drive through the groves of sycamores, the avenues of eucalyptus, and the orchards of oranges.

Among our fellow-travellers was one who had spent two winters on the Italian Riviera, one at Tangier, one at Cairo, two in Florida, one in Nassau, and was now, for the sixth time, returning to Santa Barbara. Almost everyone was ready to say that here was indeed the most attractive and the most salubrious of all winter resorts.

Allow me, then, to ask your attention to the physical facts in the case.

California is a very large State; Texas alone is larger. The area of California is about twenty-three times larger than that of Massachusetts.

The parallel of 42° north latitude forms its northern boundary; in its eastern course it intersects the Atlantic coast a little south of Boston, crosses the south of Europe through Rome and Constantinople, and cuts the Pacific coast at Hakodadi, Japan. The parallel of 32° 30′ forms its southern boundary; there are nearly eight hundred miles of coast between these two parallels, equal to the distance between Boston and Savannah—in fact, the thirty-second parallel passes near Savannah—crosses the north of Africa through Morocco and Alexandria, and enters the Pacific near Shangai, in China.

So far as latitude determines climate, then, California should have the same as that of Spain and Syria, which, in fact, it does in some degree resemble, but with important variations.

It is remarked, I believe, by Von Humboldt, that the climate of the adjacent coasts of continents in the northern hemisphere differs, and that of the remote coasts agrees. Thus the climate of the eastern coast of America corresponds with that of the eastern coast of Asia, and that of the western coast of America with that of western Europe and Africa. Some of these may be indicated by the rude outline map on the wall.

The Kuro-siro, or Pacific Ocean current, corresponding to our Gulf Stream, issuing from the China seas, pursues a northwesterly course across the Northern Pacific and strikes the American continent on the coast of Alaska, which it covers with clouds and rains, as the Gulf Stream does the western coast of Great Britain, Ireland, and the Orkney Isles. It also raises the temperature remarkably, so that the mean winter temperature of Sitka is nearly the same as that of Baltimore.

The return current, together with a deflected portion of the original current, passes down the coast of Oregon and California, at a distance from the coast increasing as it goes southward. It is desiccated as it goes, by precipitation. It gives Oregon from 50 to 60 inches of rain annually, Northern California from 30 to 40, and Southern California from 10 to 20. At Point Arguello, having now lost most of its force, it is shouldered off the coast, leaving the embayed shore of Southern California washed by the warmer waters of the subtropical sea, driven thither by almost uniform southwest winds, of little force in winter but strong in summer.

The winds are mostly from the west along the whole coast of California—west and northwest in the northern, west and southwest in the southern portion.

Thus, of 14,612 consecutive observations at San Diego, 878 were reported calm; 1,730 were reported north wind; 1,044 were reported south wind; 2,879 were reported easterly; 8,146 were reported westerly; and the mean average velocity 5.9 miles per hour, as compared with 7.7 miles per hour at New York, and 15.8 at Cape Hatteras.

As the winds move inland, they lose force and humidity, and at the base of the foothills comparative calm prevails. The ratio of decrease may be stated as about one per cent. for each five miles of distance from the sea; a ratio which may be much varied by mere topographical peculiarities.

The relative humidity of the air decreases in the same way. Thus, at the seaside stations it is from 70 to 72, about the same as on our coast; at one station fifteen miles inland, 66; at one station twenty-three miles inland, 59.

The mountain system of California divides the State into three sections, differing very much from each other. From Mount Shasta, in the north, 14,140 feet high, two chains at first diverge there, are nearly parallel, and then converge and unite. A system of parallel ranges runs from north to south along the coast, and is called the Coast Range.

From fifty to one hundred miles inland another system of ranges, parallel to each other and to the Coast Range, is known as the Sierra Nevada.

The two systems are united in the north by Mount Shasta, and in the south in San Antonio, San Bernardino, and San Jacinto.

The crest of the Coast Range may be about 3,500 feet high, with summits of 4,000 and 4,500 feet, and the crest of the Sierra Nevada about 8,000, with summits of 12,000 to 16,000 feet. The great valley lies between them, 450 miles long and about 50 broad, narrow at the upper end and broader at the lower. From the great mountain masses at the southern end of the valley a system of parallel ranges runs nearly due west, to be fused in the Coast Range, and south of this range is the triangular area of Southern California, separated on the north and east from the remainder of the State by lofty mountains, whose minor spurs cross it in a southerly course to the open Southern Sea. The general slope is about seventy feet to the mile, and it is traversed by many torrential streams, running in straight and shallow beds, full in the season of rains, and almost dry at other times—often fuller near the foothills than in their lower course, as the water sinks through a gravelly soil to reappear as springs on lower lands, or sometimes runs in underground currents into the sea. This is perhaps a kindly provision of nature, for if it ran entirely upon the surface it might be mostly evaporated in the long, bright summers; whereas, in fact, it runs underground, shielded from the sun's rays, but still within reach of human needs and devices.

The soil of this territory varies often and much; strips of clayey loam, ranging in color from a friable chocolate to a waxy black, indigitate with strips of gray, gravelly shingle and shale, and there are many grades of mixture between the two; but all are very rich in organic remains, phosphates, carbonates, and silicates, derived from the tertiary rocks.

It will be understood from the above that the drainage of the region is very perfect, there is little wet land, and no standing water. The surface, having different hygroscopic qualities, will be damp or dry, but the subsoil is always porous. This rapid and complete drainage accounts for the fact that there are no paludal miasmas. The class of miasmatic diseases is almost unknown. This statement I heard from all.

The only military post of the United States in Southern California is at San Diego, which, in its general aspect, would not seem a pre-eminently choice location, for sanitary advantage, as compared with some others in the region. The report of the Surgeon-General of the Army for 1885 says of it: "The military post showing the highest rate of non-effectiveness from sickness was San Diego. This station is the sanitarium for the Division of the Pacific, and as such its exceptional rate is sufficiently accounted for. The general salubrity of the station caused its selection for the purposes indicated."

Surgeon Summers, of the post, writing of the period from 1866 to 1873, says: "In this vicinity a case of in-

termittent or remittent fever is seldom, if ever, seen, unless contracted elsewhere, and the tabulated report of diseases reads in part as follows:

Enteric fever	0
Typho-malarial fever	0
Malarial fever or resulting conditions	1
Diarrhœa and dysentery	12
Other miasmatic diseases	0
Rheumatism	5
Catarrhs and common colds	4
Bronchitis	0
Pneumonia	0
Pleuritis	0
Phthisis	3
Other respiratory diseases	0

This seems to me a remarkable showing. So far as I have been able to extend the comparison, it is without a parallel among the army posts as to these diseases, and it is certainly in strong contrast with the reports from the military posts in Florida, where the climate is in some respects similar.

There are but two seasons to the year in Southern California, the wet and the dry; the wet season, beginning in November, continues until May. During that period all the rainfall of the year occurs, amounting to from ten to twenty or twenty-two inches. This usually falls in periods of three or four days at a time, and at intervals of from four to six weeks.

From January 27th to March 6th of the present year there was no rain at Pasadena and Los Angeles. Apparently there is less rainy weather in the California wet season than in our Eastern summer.

Less rain falls upon the seashore than in the foothills. The cool and water-laden air of the ocean, when it first strikes the land, seems to be rarefied by the increased radiation and reflection, and the power to carry moisture is increased until it reaches higher lands or meets the cooler air floating down from the hills. Thus the mean annual rainfall at San Diego is between nine and ten inches, and at Poway, twenty miles inland, is from seventeen to twenty inches. Occasionally, where from the local topography a cool current comes down upon the shore, the local precipitation is greater there. In dropping its water, as before said, the relative humidity of the air becomes less.

From the small amount of rainfall the question of the water-supply becomes important. Nowhere has the whole scheme of hydraulic questions been studied more generally, carefully, and to better results than in California. Mining, and, at various stages, most departments of agriculture are dependent upon an artificial supply of water.

The country is fairly endowed with springs, which break out, sometimes in large volume, along the foot of the terraces and in the ravines. About them are located the headquarters of the isolated farms and ranches.

Wherever there is an organized scheme of a fruit-growing colony, or other town, water for irrigation and domestic uses is provided by acequias, or aqueducts from the cañons of the mountains, often built with great labor and expense. Mountain water, thus obtained, is generally very soft, clear, and uncontaminated. Sometimes it is exceptionally pure; at others it carries more or less clay and other more positive mineralization.

The distribution of the ground-water is peculiar and interesting. You may enter a basin-like depression in the hills, containing perhaps several square miles of alluvial plain. It may not be traversed by any stream; there is no visible inlet or outlet for water, and you wonder what becomes of all that falls on the long slopes which surround it. It has, in fact, sunk into the surface where it fell, and descended, to underlie the plain at a depth often of not more than eight or ten feet. Such plains, except in the rainy season, look dry and parched; still they are set with great sycamores, evergreen live-oaks, and rapidly growing groves of eucalyptus, as well as orchards of fruit-trees. The young plants may require to be irrigated for a year or two, but soon their roots reach down to the unfailing streams below, and thenceforth they require no artificial water. After the third year the vineyards in such localities are full of lush leafage and succulent fruit-and the wells about the farm are full to within ten feet of the surface.

The facts which characterize the climate are best seen by comparison. For that purpose I have prepared the rude chart, on opposite page, and have taken the details from the Report of the Chief Signal Officer of the United States for 1881, with the exception of those for Aiken, S. C., which is not a Signal Service station. The figures for this locality I have derived in part from the papers of Dr. Geddings, whose able and interesting papers have done much to extend the reputation of Aiken as a sanitarium; and in part from the report of the nearest Signal Service station, at Augusta, seventeen miles distant.

New York is chosen for one point, because it is our standard of comparison; Aiken, as a southern inland, and Jacksonville as a seaside, sanitarium; San Antonio, to represent the elevated Texan plateau; Los Angeles, Southern California; and St. Paul the interior Northwest. Other points—on the Florida coast, for example—might have been chosen, but not being Signal Service stations, the data are not at hand.

The first vertical column gives the elevation above sea-level. This is to be borne in mind for the comparison, as it modifies all other conditions.

The second vertical column gives the number of days in the year in which rain fell—the least appreciable quantity, namely, one-hundredth of an inch, constituting a "rainy day."

The third column gives the mean average per cent. of cloudiness, no day being called clear if at either of the three observations any clouds were observed.

Column fourth gives the mean relative humidity, saturation being 100.

Column fifth, the rainfall in inches.

The first column on the right gives the mean temperature of January and February, the two coldest months; the fourth on the right, the mean temperature of the two warmest months, July and August.

The last column, the mean annual temperature, which is not of much importance, since a place where the thermometer has a great range may have the same mean as a place where the range is but a few degrees.

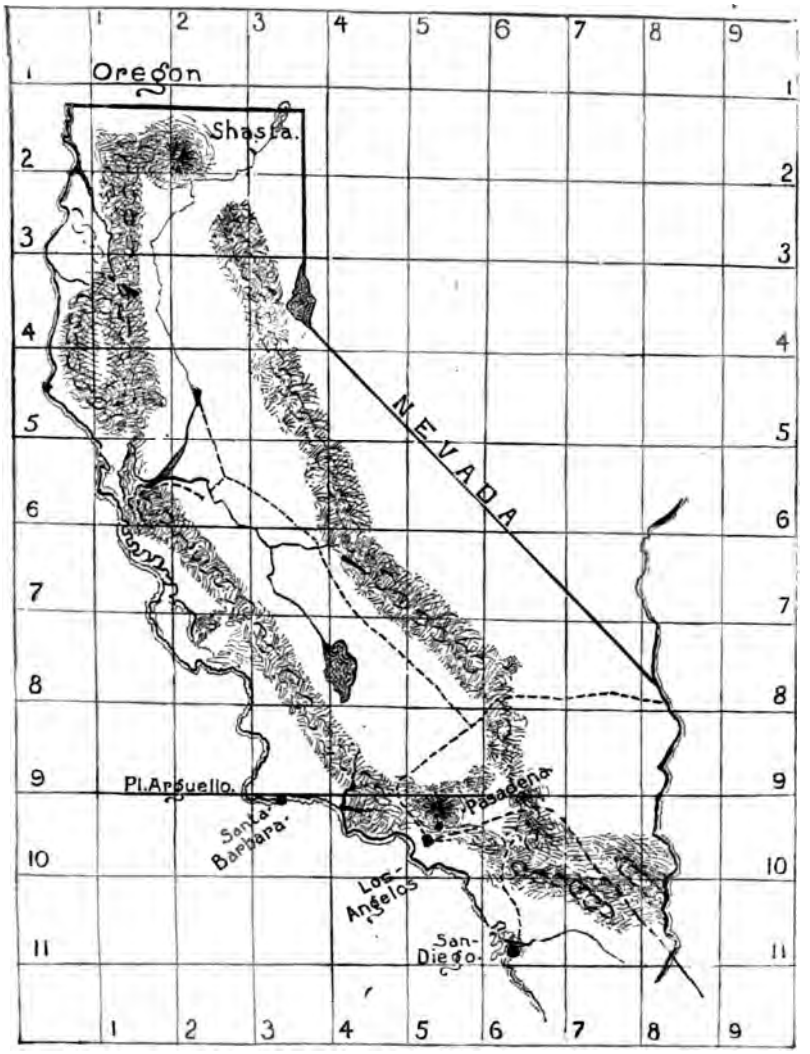
A much more instructive indication is obtained by noting the difference between the mean temperatures of the hot and cold months, which is indicated graphically by the black lines, and arithmetically by the figures attached. It thus appears that Los Angeles has fewer rainy days, less cloudy weather, less rainfall, a much more equable temperature, closely approximating the ideal mean of sixty degrees. In dryness of the air Aiken exceeds it, but it must be remembered that Los Angeles is ten times as far from the sea as Aiken, and considerably lower in level, and is, in fact, not an average point for Southern California.

I esteem the comparative cloudlessness, taken in connection with the mild and equal temperature, as most significant. Weber,[1] quoting from the "Proceedings of the British Royal Society for 1877 and 1878," says: "Light is inimical to the development of bacteria and the microscopic fungi associated with putrefaction and decay; the preservative quality of light is most powerful in the direct solar ray, but can be demonstrated to exist in ordinary diffused sunlight; and the actinic rays of the speculum have the greatest effect. . . . In the higher animal organisms, when deprived of light, oxidation does not take place so energetically, tissue change and nutrition are impaired. . . . In winter an invalid in southern lands enjoys the sun and daylight for several hours longer than in high northern latitudes."

The long, bright day of Southern California, with unclouded sky, mild and even warmth, and gentle winds,

[1] Ziemssen's Cyclopædia of Therapeutics, vol. iv., p. 41, and passim.

invites the invalid to live in the open air and protects him while there.



From many sides we gather the inference that there is something in the air and soil of Southern California which nourishes, improves, and prolongs organic life to a remarkable degree.

The eucalyptus tree adds from eight to twelve feet annually to the length of its trunk. In a grove twelve years old there are many trees over one hundred feet in height. About Mr. Cooper's ranch, at Santa Barbara, are groups of live-oaks which are thought by good judges to be three or four thousand years old, and the Sequoias of Calaveras, the giants of the vegetable world, are of untold date. It is commonly said that the domestic animals live longer and are more prolific than at the East.

The California racing stables, particularly the Santa Anita stable near Los Angeles, have been brought East for the last two racing seasons, and have taken more prizes than any others of equal size. Since Frémont's great ride in 1847, the endurance of the Californian horse has been well known. I have never seen elsewhere more fresh-colored, strong-limbed, bright-eyed children.

The question of high and low altitudes for the treatment of thoracic disease has been widely debated. So far as it concerns diseases of the heart, all will recall the careful and comprehensive paper of our President. As to diseases of the respiratory organs, Dr. Denison, of Denver, has written papers[1] which show great research and ingenious argument. It is not my purpose, at present, to enter into this discussion, further than to say that the influence is so positive that the choice or refusal of it cannot be an indifferent matter. Having spent a portion of two seasons in Colorado, I have certainly seen a number of young and vigorous subjects, who have apparently been benefited by residence there; while I have also been more intimately conversant with a series of cases in which the results were clearly disastrous.

In Dr. A. N. Bell's work,[1] on the "Climatology of the United States," may be found a series of reports from the surgeons of the United States Army, stationed at many points in the mountain region of the West, which, with great uniformity, and sometimes in very strong language, assert that the particular form of climate which is there found, while it may promote immunity from consumption among the natives and in the well, is very unfit for those in whom the disease has been already recognized.

It is possible in Southern California to find more or less comfortable abodes up to the level of four thousand feet, where the other and greater advantages of the climate are not lost. Such are San Marcos Pass, Smith's Mountain, San Gorgonio, and Arrowhead Springs. In my judgment, however, the lower levels, from eight to fifteen hundred feet above sea-level, will be found adapted to a far larger number of cases.

The food-supply in Southern California is very good. Fish in variety and of good quality are abundant. The Eastern man, however, will miss our oysters. Game, fowl, and poultry are also abundant. In particular, excellent milk and butter abound, and good beef and mutton. In these particulars Southern California has great advantage over our own southern seaboard, Florida especially. Of fruits, grapes, oranges, pears, apricots, peaches, melons, guavas, etc., are of the best and cheapest. Apples are abundant, but inferior.

It remains to speak of the special points which are generally sought by invalids; and since so much of the comfort and well-being of the invalid depends upon how he is lodged and fed and amused, I shall be excused if I allude to the various hotels and other accommodations.

San Diego is the most southern—a town of 7,000 inhabitants, possessing the best harbor on the coast except that of San Francisco. The town is placed on the slope of a hill which rises to a height of three hundred feet in

	Elevation.	Rain-Days.	Cloudiness.	Humidity.	Rainfall.	Temperature. Jan. & Feb.	Mar. & Apr.	May & June.	July & Aug.	Sept. & Oct.	Nov. & Dec.	Mean.
New York.	—	122	41	73	43	27	41	62	72	55	34	48.
Aiken.	585	132	37	58	51	45	56	72	81	68	48	61
Jacksonville	37	127	36	68	67	54	63	79	82	72	58	68.
San Antonio.	676	113	29	67	34	43	66	81	81	61	50	63.
Los Angeles.	350	51.	28.	67.	16.	54.	58.	64.	65.	62.	55.	59.
	811.	99.	41.	69.	29.	14.	37.	66.	71.	52.	18.	43.

St. Paul — 57
New York — 45
Jacksonville — 38
San Antonio — 38
Aiken. — 36
Los Angeles. — 11

Difference of the Means of the two coldest and the two warmest Months.
Algiers 23
Montana 33.

[1] N. Y. Med. Journal, June 12, 1886.

[1] Climatology, etc., of the United States, pp. 202 et seq.

the distance of a mile from the shore of the bay. The ambition of the place is maritime commerce. The present town is only ten years old; a great many unfinished projects are outlined upon its surface and in various stages of progress, giving to the place an unfinished look. There are some good hotels, some handsome public buildings, a few fine, and a great many small and temporary, dwellings. The lack of water-supply has hitherto been a cause of embarrassment and an unsanitary element. That, I believe, is soon to be remedied. The local climate, in the matter of temperature, is unsurpassed, for its winters are warm, and its summers, except for a few days when the north wind blows, are very cool and uniform. The climate is, however, damp. The rains are few but fogs are frequent. The social conditions are not yet far advanced.

Two hundred and fifty miles northwest, and at the other end of the coast of Southern California, is Santa Barbara, a town of 5,000 inhabitants. It may be called the Newport of the Pacific, widely known for its charms and attractions. Until, in the last decade, railroads were built, it was one of the few places which were accessible by sea. It has been long occupied, is much frequented by invalids, has a highly developed social life, good hotels, libraries, studios, clubs. The mountains and the sea come close together here, and the landscape has a very varied and enduring charm. It has now no railroad facilities, and communication with the rest of the world is, in the rainy season, apt to be irregular and sometimes infrequent. Like San Diego, it is very damp, as the moss-covered roofs and lichen-encrusted fences indicate. More than San Diego it is windy, for it lies in a trough between the hills, opening to the southeast and northwest; up this valley the fogs roll in the early hours of the day, and whatever winds there may be are compressed and accelerated to an unusual force. The channel, twenty-five miles wide, is separated from the open sea by a chain of islands, large and small, low and lofty, and the beautiful bay affords fine sailing, fishing, and surf-bathing, while the cañons of the Santa-Ynez range offer to the equestrian many picturesque winding trails, which he may follow as far as he will. The water-supply is abundant and excellent. The older parts of the town and some of the hotels are not in good sanitary condition, but there are enough satisfactory accommodations. The young are sure to be enthusiastic about Santa Barbara, and to all who have no occasion to fear a damp and somewhat windy spot, it is very attractive and eligible.

Midway between San Diego and Santa Barbara, but twenty miles back from the sea, is Los Angeles, which has been mentioned as a rapidly growing town. As the focus of all the railroads and the entrepôt of the best agricultural region, in the geographical centre of Southern California, with no serious commercial rival nearer than San Francisco, which is as far as Buffalo is from New York, it is destined to become a large and rich city. The business town is on a low plain environed on three sides by hills. The soil is a tenacious clay, giving abundance of mud in wet weather and dust in dry. The water-supply is not good, although it is in a way to be improved. The surrounding hills, which are already crowned by many fine residences, are beautiful and salubrious, but the more compact portions of the city are liable to typhoid and zymotic disease, and the general sanitary condition has the defects which are generally found in a rapidly growing town. It does not depend upon the company of invalids, for it has its hands full of industrial and speculative interests. Hitherto the hotels and boarding-houses have left much to be desired, but better accommodations are promised and in progress. In schools, churches, societies, theatres, hospitals, and medical men, it is well endowed.

Seven miles east of Los Angeles and from five to six hundred feet higher, on an elevated triangular plain, at the very base of the Sierra Madre, whose crest, though four thousand feet higher, is not five miles away, is Pasadena, "Crown of the Mountains." It is a suburban town of 4,000 inhabitants; originally a fruit-growing colony occupying about fifteen thousand acres of land, laid out like a park, and now covered with groves of oranges, lemons, apricots, walnuts, and figs, defined by lines of tall eucalyptus, avenues of pepper-trees, hedges of cypress, and set with villas embowered in the fragrance and bloom of all sub-tropical plants and flowers. A terrace six miles long and perhaps sixty feet high, divides it from the long and wide valley of San Gabriel. Along the terrace fresh streams burst forth and groves of stately oaks and sycamores are scattered. The valley below is covered with vineyards and grain fields. The Sierra Madre, carved by innumerable ravines, culminates in the southeast in the snow-capped domes of San Antonio, Cucumonga, San Bernardino, and San Jacinto, from nine to eleven thousand feet high. Beyond the plain is the blue and shining sea, and the whole landscape has a charm of grandeur and of beauty which prolonged contemplation still increases. The community, now mostly made up of exiles from ruder climes, is very cosmopolitan in its character; culture, taste, and wealth are not wanting, and social pleasures are many and varied. There is a good public library, many boarding-houses, of many grades, sanitaria of various kinds, and among the adjoining foothills is the picturesque villa—Sierra Madre Hotel, which has long possessed an excellent reputation and custom. Within the last year parties who have large and long experience in the charge of invalids have built, on an elevation in the plain, the Raymond Hotel, with capacity for from three to four hundred guests. In location, construction, and appointments it is very superior, and for the management one of the best-known hotel-keepers of the East has been secured. The soil of Pasadena is light and dry, the roads are good, livery is good and cheap, and the excursions are many and delightful. The water-supply is of the best quality. There will be communication with the neighboring city by almost hourly trains.

In my judgment Pasadena is the point of election for, by far, the larger number of invalids. Especially do the conditions before enumerated fit it for all cases of renal disease, all cases of pulmonary trouble attended with free secretion, for enteric, rheumatic, and neuralgic affections.

It is not to be forgotten that for many invalids, home, with its comforts, its social and moral support, must still be the best place; that acute cases, and those far advanced in disease of the heart and lungs should not undertake a long journey, except under sufficient medical advice—which also should be allowed to control the conditions and extent of movement.

Did time allow I would speak of the mineral springs and baths. The sulphurated and chalybeate waters at various places compare in constitution with those of Central New York and Virginia. In accommodations and general resources they are, of course, not yet developed. I should mention beautiful Riverside, comparable with our Lenox, the theatre of most successful orange culture and of a highly advanced social order. Its altitude and dryness commend it to some invalids. It is, however, a windy place, with more than usual variations of temperature.

In these days of mind-cure, faith-cure, and subjective medication generally, one of the best things that can be said of Southern California is that it is an eminently cheerful region. Nostalgia and hypochondria cannot well continue there; there is too much enterprise, too much pleasure abroad. I have never seen so many contented people so far away from home.

It is common among the older residents to speak of it as "God's Country," which may sometimes be a way of complimenting the Elysian climate and the bountiful soil, but is oftener, I think, a more serious recognition of the Power and the Light which builds and adorns the Cosmos

> "Which wields the world with never-varying love,
> Sustains it from beneath and kindles it above."

INTUBATION OF THE LARYNX—THREE CASES, WITH COMMENTS.

By WILLIAM P. NORTHRUP, M.D.,

PATHOLOGIST TO THE NEW YORK FOUNDLING ASYLUM.

INTUBATION of the larynx for diphtheritic croup is such a recent resource, and is so much under discussion at this time, that it is thought best to add as rapidly as possible to the recorded cases.

In the New York *Medical Journal* of April 3 and September 18, 1886, the writer has recorded nine cases of intubation, and he desires to number the present additional cases X., XI., and XII., and comment on the twelve together.

Of the twelve cases five have recovered. Of the five which recovered all had diphtheritic exudate in the pharynx; all had albuminuria; all had, before intubation, these conspicuous symptoms, viz., croupy cough, croupy inspiration and expiration, dyspnœa, recessions, and absence of vesicular breathing over the lungs behind.

Each case has been examined by two or more physicians, who are prepared to vouch for the accuracy of the observations here recorded.

Of those which died, one, aged five years, died of malignant diphtheria on the third day of its illness, and twenty-nine hours after intubation.

One, aged seven years, died of sudden heart failure on the third day of illness, and eight hours after intubation.

One, aged six years, died of well-marked pneumonia of one side on the tenth day of illness, and five days after intubation.

The four following cases died of extension of membrane into the finer bronchi, and before the development of physical signs of pneumonia.

One, aged five years and three months, died on the fourth day of illness, and thirty-six hours after intubation.

The second, aged four years, died on the ninth day of illness, and four days after intubation.

The third, aged five years, died on the fourth day of illness, and twenty hours after intubation.

The fourth, aged two years, died on the fourth day of illness, and twenty-four hours after intubation.

In these cases the days of illness count from the first observed symptoms, of whatever kind, and the tube has been inserted only when dyspnœa was urgent.

CASE X.—Katie M——, aged five years and two months, a patient of Dr. E. C. Harwood. Died.

On September 16th the patient was suddenly taken with convulsions; temperature, 104⅕°. The bowels were thoroughly evacuated, and no further convulsions followed. Temperature sank to 99°.

On the second day the temperature was again 99°, a croupy cough had developed, diphtheritic exudate had made its appearance in the pharynx, and by afternoon the respirations had become croupy. Ipecac produced emesis, but no relief of laryngeal symptoms.

Third day.—Patient had a comfortable night. Temperature in the morning was 99⅗°. The exudate of fibrin and pus on the walls of the pharynx had spread, and by 5 P.M. dyspnœa showed that the exudate in the larynx had likewise more fully developed. Five hours later the condition demanded mechanical interference.

At this time the writer saw the case with Dr. Harwood, and made the following observations: Child's face was pale leaden color, with an anxious expression. There was dyspnœa, urgent, and causing marked recessions. Respirations were loud and stridulous, pulse strong and regular. Pharynx contained pseudo-membrane over tonsils and adjacent mucous membranes. There was absence of vesicular murmur over both lungs behind; no râles. Temperature, 101⅗°.

At this time the child was becoming exhausted, and cyanosis was just beginning.

The tube was promptly inserted, and the relief, after moderate coughing, was effectual. In five to eight minutes the child dropped into a tranquil sleep, and breathed quietly and regularly.

On examination of the chest, a few moments later, the vesicular murmur was distinct, low-pitched, and without râles.

Fourth day.—Slept well all night. Took milk with but little laryngeal irritation and little cough. At 10.30 A.M. the temperature had reached 103° in the rectum, the respirations 43 per minute. By 4 P.M. temperature was 105°, and by 6 P.M., twenty hours after intubation, the child's bronchi had become so narrowed by invasion of the membrane as to cause most horrible suffocation, stupor, and at last exhaustion and death.

In this last dyspnœa the inspiration was quick, the expiration prolonged, loud, and labored.

CASE XI.—Eddie V——, aged seven years, a patient of Dr. George D. Bleything. Recovered.

Saturday, September 18th, patient was overtaken with convulsions and symptoms of indigestion, to which he had been subject. On the following day Dr. Bleything observed diphtheritic patches in the pharnyx, and a croupy cough.

On the fourth day I saw the patient. The history was of slow and gradual development of croupy symptoms, unremitting. Respiration was mostly quiet, especially after coughing. Air was entering both lungs freely; vesicular murmur low-pitched; no râles, no bronchial element.

On the sixth day it was reported the child had been restless for twenty-four hours; sleeping for a few moments, then tossing about; having a harsh, dry cough.

Inspiration and expiration were croupy, the former more marked; recessions were distinct above and below; breathing labored. The action of the heart was good. Exudation upon the pharynx disappearing. The examination of the lungs was most interesting. There was entire absence of vesicular murmur everywhere over the chest behind. Over the lower fourth of the left lung were crepitant râles. Over the upper third was rude, or broncho-vesicular, breathing. Over the root, and a little below, much exaggerated bronchial breathing; no dulness. Over the right lung was simply absence of vesicular murmur, and increased bronchial element over the root. The condition of the left lung was very suggestive of beginning inflammation, beyond simple collapse.

Dr. W. A. Hume, who was present, also made an examination, with a like report.

The tube was inserted, and as soon as the coughing paroxysm (five minutes later) subsided, examination was again made. Good, low-pitched, vesicular breathing, free from râles and all bronchial element, was heard over both lungs everywhere, except at the roots of the lungs.

During the cough a large piece of pseudo-membrane was ejected.

The boy seemed large for his years, and it was thought best to insert a larger tube than his age called for. The tube was inserted.

Ten minutes later he was sleeping quietly, his respirations noiseless. At this time his pulse was 120; his temperature, 103½°, rectum.

After four hours of sleep he was given milk. At each attempt to swallow this he was overtaken with severe coughing, and seemed unable to swallow any of it. During the night the result was much the same. On the seventh day it was thought best to remove the tube for a time, in order to allow the child to swallow food, and, if necessary, reinsert it after two to four hours. The patient was near at hand, and in convenient hours for finding a physician.

The tube was accordingly removed, after having been in the larynx sixteen hours, and relieving the laryngeal symptoms fully. Milk was again offered, and the child eagerly grasped the glass and tried to drink. This time it regurgitated through the nose, and but a small portion reached the stomach. Twelve hours later rectal temperature was 101½°; pulse strong and regular; mod-

erate laryngeal obstruction, cough very hoarse, but in respiration no marked stridor. Vesicular murmur behind was diminished; no râles. It was a question at this point whether or not the tube should be inserted, to relieve the tendency to congestion in the lungs. Patient took two pints of milk in twelve hours; general condition was good. Pulse was 112 to 120, and the respiration 24.

Eighth day.—Pulse, 110 to 128; respiration, 28 to 38; temperature, 100½° to 101½°, rectum. Larynx became narrowed and gave rise to dyspnœa. After severe paroxysms of coughing, during which occasionally pseudo-membrane was ejected, the breathing was temporarily relieved. Exudation upon the pharyngeal walls was no longer to be seen.

P.M.—To quote from the notes: "Dyspnœa increasing. Larynx seems dry and irritated, and the child makes persistent effort to clear the larynx. Tube reinserted to relieve the dyspnœa and the exhausting cough. Diminished vesicular murmur gives place at once to full, low-pitched, vesicular breathing, and the child becomes tranquil and drops into a peaceful sleep." Opium had been administered, to relieve the cough, without effect.

Ninth day.—Pulse, 112 to 120; respiration, 32 to 36; temperature, 100⅗° to 101½°, rectum. Breathed quietly all day; and good, low-pitched vesicular murmur, free from râles, could be heard over both lungs. He swallowed milk with difficulty. Different semi-solids were tried—scrambled egg, frozen milk, corn-starch pudding, etc. These he found much less difficult to manage with a tube in his larynx, and they, together with enemata, nourished him satisfactorily. General condition at this time was very good.

Soon after our evening visit patient coughed out the tube, and after it a piece of pseudo-membrane "the size of a finger."

Tenth day.—At the morning visit the patient was thought to need the tube again. Cough was hoarse (coarsely) and exhausting, dyspnœa moderate, yet sufficient to keep the air from filling the lungs. The left lung again seemed to get less air. At this late date the fear of pneumonia was so great that it was deemed best to facilitate as much as possible the entrance of air, and therefore a tube was again inserted. This time a smaller tube was selected, hoping it might sink deeper into the larynx and not interfere with the act of swallowing so much.

Air entered through it quite as well as through the larger, but swallowing was no more successful.

Eleventh day.—Tube again coughed out after a sojourn of ten hours in the larynx.

Pulse, 100; respiration, 32; temperature, 99⅘, rectum. At first the lung did not fill well, and again the tube was considered. However, the temperature was low (99⅘°), the general condition excellent, and, while we were considering, the child coughed out a large quantity of mucopus, and respiration was thereafter free. I have not seen the patient since.

Albuminuria was present on two examinations in large quantities. From this point the child went on to recovery. There was never complete aphonia during the intervals in which the tube was out, and after its entire removal the voice gradually became more clear for three weeks.

CASE XII.—Rose (foundling), aged twenty-five months. Died. Dr. R. J. Stanton kindly assisted in the case of this patient, which was with its paid nurse in Harlem. The nurse reports the general condition of the child as fair; has always had a "bad temper," "been cross-like," but never sick. While out for a walk in the park she caught cold and that night was croupy—*coughed croupy*. Two days later she appeared at the out-door department of the Foundling Asylum, when the diagnosis of membranous croup was made, and the progressive laryngeal stenosis was thought to be in need of the tube.

At 9 P.M., October 9th, the writer saw the patient with Dr. Stanton, and made the following observations: Child was sleeping lightly; head thrown back; face pale and anxious; eyes not fully closed; breathing sixty times a minute, with a harsh, dry, croupy sound, more marked on inspiration; pulse rapid and feeble, and wanting at the moment of inspiration; recessions moderate; entire absence of vesicular murmur over lungs behind; no râles. Diphtheritic exudate over tonsils and margins of uvula.

After a little stimulation the O'Dwyer tube was inserted. This was followed by severe coughing for three to five minutes, during which time a large piece of pus and fibrin exudate was thrown out on a towel, and in seven minutes the child was sleeping tranquilly and breathing quietly. The nurse was directed to allow the child to sleep four hours before offering it milk, in order to allow the larynx to become accustomed to the foreign body. On the following morning, eleven hours after the insertion of the tube, the pulse was 144 per minute, weak and irregular; respiration, 74, noiseless; temperature, 104°, rectal. Nurse reports that the child slept two hours, asked for a drink, which she gave it, and which it swallowed well, and went to sleep again for two hours. Since then she has been restless.

Thirteen hours after the insertion the temperature reached 104½°, rectum; respiration, 76; pulse, 144, intermittent and feeble. Examination of chest showed the vesicular murmur less distinct, fine râles at base of left lung, bronchial element at root more marked. Just before mid-day the child coughed up a piece of pseudo-membrane, size of a ten-cent silver piece.

From noon to night the restlessness increased, breathing became more rapid, the temperature crept up, cyanosis and asphyxia, with great restlessness, were soon followed by death.

The tube was in twenty-four hours, relieving effectually all laryngeal obstruction, and on removal after death was found clear and clean. Urine was not examined.

To briefly summarize: The child became croupy on Wednesday night and died on Sunday night. Membrane developed in larynx first, and spread up and down. Tube was inserted twenty-four hours before death.

Clinical Department.

A CASE OF BELLADONNA-POISONING.

DR. J. B. KENT, of Putnam, Conn., reports the case of a lady, about thirty-six years of age, of rather delicate constitution, who took by mistake one teaspoonful of the fluid extract of belladonna. Dr. Chapin was sent for at once; but not being at home at the time, did not arrive at the bedside of the patient for more than an hour after the dose had been swallowed. Finding an alarming state of things he called Dr. F. G. Sautelle in consultation, and Dr. Seth Rogers was also present. The attending physician had administered, hypodermatically, a dose of apomorphia on his arrival, but without very satisfactory results. One-third of a grain of morphine was then given subcutaneously, and was followed soon after by a second dose of the same amount. Brandy was also given freely by the rectum and subcutaneously. Dr. Kent was called to the case about three hours after the belladonna had been taken, and found the patient very thoroughly narcotized—unable to move a muscle—pulse, 120; respiration, 14 in a minute; pupil fully dilated, and skin thoroughly cyanotic. He suggested the use of oxygen gas by inhalation; but as he was then five miles from home, more than an hour elapsed before the oxygen could be obtained.

The inhalations were begun about four hours and a half after the poison had been swallowed. The patient was then breathing four times in a minute; pulse, 140; entire surface of body a deep purple color. Dr. Sautelle,

who sat near, and watched the pulse and respirations, remarked that the respirations were dropping off at the rate of one every fifteen minutes. After the patient had inhaled about four gallons of the gas a slight change was discovered. The pulse became fuller, breathing deeper and a little more frequent; then soon followed a slight improvement in the color of lips, a slight reddish tinge taking the place of the purple. By this time the eight gallons contained in the bag had been exhausted, and a brief interval was necessary in order to generate another bagful. During this period, of perhaps ten minutes, the pulse and respirations dropped back to where they were when the inhalations began. After about twenty-four gallons of oxygen had been inhaled, however, the improvement was permanent; the pulse at this time being 120, and the respirations about six in a minute. The inhalations were continued as above from this time on, with a perceptible and most satisfactory improvement in all the symptoms. At 10.30 P.M., eight and a half hours after the poison had been taken, the patient had inhaled, in all, sixty gallons of oxygen gas, and was so far restored that it was thought unnecessary to continue the remedy any longer. The patient was now breathing about fifteen times in a minute, and deeply, as though in a profound sleep, though she was yet entirely unconscious; pulse about ninety per minute, and the cyanosis had entirely disappeared.

All those who saw the case were at one in the conviction that the patient would not have survived another hour had it not been for the oxygen gas, whereby it was rendered possible to oxidize the blood, and thus furnish a stimulus to the failing heart and lungs.

SIMS' SPECULUM IN DELAY OF THE AFTER-COMING HEAD.

DR. ROBERT MCC. LORD, of Kansas City, writes: "In pelvic presentations when, after the birth of the body, the head cannot be immediately delivered with safety, and death of the child from asphyxia is imminent, air may be freely admitted to its mouth and nostrils, and pulmonary respiration established, by gentle traction on the posterior vaginal wall with a Sims speculum."

IS RHUS-POISONING A PURELY LOCAL AFFECTION?

DR. GEORGE WHITE, of Chicago, writes: "During the past summer a lady patient of mine, while progressing in her first gestation, suffered from ivy-poisoning; it was the second time she had been so afflicted. The eruption of papules and pustules was confined to the abdomen, arms, and dorsal surfaces of the hands. Fresh butter (the prescription of a neighboring gardener's wife) seemed to be most effective in allaying the inflammation. One of the pustules on the left arm attained the proportions of a well-developed boil. About the time the disease was disappearing labor came on, and a healthy male child was born. On the sixth or seventh day after birth there was noticed on the child's belly an eruption which was identical with that from which the mother had suffered. The rest of the body was clear. Incisions into the pustules and the application of oiled cloths restored the skin to its normal condition in four days. I do not believe the disease was communicated from the mother's arms and body to the child. The nurse had a slight 'washing-soda' rash on her hands and forearms, but at no time were there pustules. The father and mother are young, temperate, and healthy. Both are light in complexion, the lady's flesh being especially delicate. We know how readily a mother can extend constitutional disease to her child in utero. In this case there seemed to be no source of external communication of the malady. Hence the question occurred to me, 'Is rhus-poisoning merely a dermatitis or a constitutional ailment?' If it is a local trouble and communicable only by immediate contact, how could the child's head, neck, arms, breast, back, legs, feet, and hands escape? Is it not probable that with the mother it became constitutional, and then was communicated to the child in utero, and developed in it afterward? Have any of your correspondents had any like experience in this line?"

ASPHYXIA OF THE NEW-BORN.

DR. R. W. ERWIN, of Bay City, Mich., writes: "I wish to add a suggestion to those already given upon the treatment of asphyxia of the new-born. Place the baby over the arm or on the bed with the head and shoulders lower than the rest of the body. Then apply the hand, with the palm full of brandy, to the navel, and rub briskly, carrying the hand over the stomach and heart, thence over the face. Usually there will remain enough in the hand to moisten the lips, nose, and face. The moment the brandy comes in contact with the navel an effort at inspiration follows, which should be further encouraged by light spanking and artificial respiration if necessary. If the one handful of the spirits is not sufficient, apply more. I have succeeded when no response came from suspension of head downward, by alternately dipping the child into hot and cold water, or through artificial respiration. So long as the infant has color, resuscitation is almost certain, if no serious lesions exist. The marbled skin means death. If the face is very livid, do not suspend long. Clear the throat from mucus, and, if necessary, wet the finger with brandy and carry it into the pharynx and draw the tongue forward, so as to uncover the air-passage. The physician should always keep cool, and use any or all the rational measures which the nature of the case may indicate."

QUININE AS AN ANAPHRODISIAC.

DR. JOHN A. MCKINNON, of Selma, Ala., has found in his practice that the continuous use of sulphate of quinine will reduce the venereal desire, and in cases of old age it will destroy the animal propensity completely. He says that he has had cases under observation for several years who took from five to twenty grains daily, not for antimalarial purposes, but because they had formed the quinine habit, and he has found on inquiry of such patients that the venereal desire in them was diminished, impaired, or destroyed. In most cases the subjects would become alarmed at their condition and ask for relief. In the treatment of gonorrhœa in this malarious section, Dr. McKinnon often administers quinine in the inflammatory stage, for the dual purpose of counteracting any malarial complication and to control chordee. It must for this purpose be administered in not less than ten-grain doses at proper intervals, and it acts, he writes, in this respect more satisfactorily than camphor, lupuline, or the bromides.

ANTIPYRINE IN THE TREATMENT OF ULCERS.—Dr. Bosse states that antipyrine is an excellent agent for promoting granulation in old ulcers of the leg (*Berliner Klinische Wochenschrift*). He covers the surface of the ulcer with antipyrine, over this places a layer of salicylated cotton, and retains all in position by means of a tight bandage. The dressing is changed every day. After the ulcer has commenced to granulate well it is treated by touching with nitrate of silver, and then dusting with iodoform.

COCAINE IN ANGINA PECTORIS.—Lashkevitch recommends cocaine in doses of one-third of a grain three or four times a day for the relief of angina pectoris. In addition, inhalations of oxygen during the attack are advised.

Progress of Medical Science.

HEMORRHAGIC APOPLEXY AND MILIARY ANEURISMS.—In a series of clinical and pathological memoranda published by Dr. Byrom Bramwell, we find some interesting observations on the above subject (*Edinburgh Medical Journal*, September, 1886). The author's views are in accord with the statements of Charcot and Bouchard, that the immediate cause of the ordinary form of cerebral hemorrhage is usually the rupture of minute (miliary) aneurisms, and that these aneurisms are, as a rule, the result—a late, and, as it were, a secondary result—of a lesion which is widely spread throughout the arterial system of the brain. This lesion, which they have termed diffuse periarteritis, chiefly affects the minute arteries (arterioles), but may also invade the large arterial trunks at the base, and their branches in the meninges, on the one hand, or may extend to the capillaries of the brain on the other. All three coats of the vessel may be involved, but, as a general rule, the lesion progresses from without inward, the outer coat being first and most affected. In this, and also in some other respects, periarteritis differs essentially from ordinary atheroma (sclerotic endoarteritis), which, up to the time when Charcot and Bouchard published their observations, was thought to be the lesion with which cerebral hemorrhage was associated. When an artery affected with diffuse periarteritis is examined microscopically, the most common condition is found to be an enormous multiplication of nuclei in the lymphatic sheath and adventitia, with atrophy and disappearance of the muscular elements of the middle coat, and it is important to note that this atrophy of the muscular fibres is unattended with fatty degeneration. In some cases—and these are probably old-standing cases in which the multiplication of nuclei has at one time been present, but has disappeared—the irregularly heaped-up masses of nuclei in the lymphatic sheath and adventitia are not seen, but the layers of the arterial coat are simply thickened, and present a striated, fibrous appearance, the adventitia being more or less closely dotted over with fusiform nuclei arranged longitudinally with the canal of the vessel. The inner coat is only affected in the later stages of the process; it may, indeed, be quite unaffected even when the other coats are extensively involved. Implication of the inner coat is manifested by multiplication of its nuclei, which lose their ovoid shape and regular arrangement. In the earlier stages of the process the lymphatic space between the lymphatic sheath and the adventitia may remain patent, containing, perhaps, some cellular elements—fatty particles or granules of hæmatoidin—a condition which is by no means peculiar, and which is seen in many other morbid states. When the lesion is more extensive the lymphatic space is often obliterated, and the thickened lymphatic sheath and adventitia are, as it were, fused together. In consequence of the atrophy of the muscular fibres of the middle coat, the resisting power of the wall of the vessel is diminished, and the blood-pressure tends to produce dilatations which may be of various forms—cylindrical, fusiform, moniliform, and saccular—and it is to these dilatations that Charcot and Bouchard have given the name of miliary aneurisms. The fibrous thickening of the lymphatic coat and adventitia, which is seen in some cases, seems to be attended with some compensatory advantages; for it increases the resisting power of the arterial coat, supplying the place, as it were, of the muscular elements which have disappeared. Charcot states that miliary aneurisms are scarcely ever observed where the external coat has reached a certain degree of fibrous metamorphosis. This rule is not, however, without exceptions, as some of his own specimens clearly show. Charcot and Bouchard have detected miliary aneurisms in every case of cerebral hemorrhage (cerebral hemorrhage *par excellence*) which they have examined. The number of miliary aneurisms which are present in any given case varies considerably. In some cases only two or three have been detected, even after the most careful examination, while in others more than one hundred have been counted. These miliary aneurisms, which are distinctly visible to the naked eye, having a diameter of $\frac{1}{100}$th to $\frac{1}{4}$th of an inch, occur most frequently, according to Charcot and Bouchard, in the optic thalami and corpora striata, then in the pons, the gray matter of the convolutions, the claustrum, the cerebellum (especially the parts in the neighborhood of the rhomboidal body), the cerebellar peduncles, and, lastly, the centrum ovale. Miliary aneurisms are most easily observed in the convexity of the cerebral hemispheres. After removing the pia mater from the surface of the convolutions, they are seen as little, spherical, shining grains, not unlike the glomeruli of the kidney, on the summit and sides of the gyri or at the bottom of the sulci. When the aneurisms are situated in the substance of the gray matter, or at the junction of the gray with the white matter, they are best detected by making sections through the brain-substance at right angles to the surface of the convolutions; but even when completely buried in the gray substance, they may often be dimly seen through the brain-tissue as ill defined, bluish spots on the free surface of the convolutions. Their detection in the walls of recent hemorrhagic cavities is more difficult. The cavity should be laid open by a free incision, and the blood and clot which it contains allowed to escape; the brain should then be placed in a basin of water, which should be frequently renewed, without shaking, by simply inclining the vessel from time to time. In this way the clot, which is adherent to the walls, is gradually detached, and a number of fine, flocculent, vascular filaments are seen attached to the edge of the cavity. On careful examination little globular swellings will be seen on the free extremities of some of the fine vascular filaments. The majority of these swellings are found, on microscopical examination with a low power, to be blood-clots, but some of them may be little globular aneurisms. In some cases the miliary aneurisms, which have been detected adhering to the walls of recent cavities, have been found to be ruptured, and the actual source of the bleeding has in this way been demonstrated. The miliary aneurisms are sometimes round and globular swellings springing from the lateral wall of the vessel; in other cases, fusiform or spindle-shaped, and consisting of a more or less uniform enlargement of a minute artery.

THE VITALITY OF PATHOGENIC MICRO-ORGANISMS IN WATER.—The study of micro-organisms in water is receiving a continually increasing measure of attention, since the impulse which was given to this and all other branches of bacteriology by Koch's now well-known method of gelatin-plate cultivation. For several years past a large number of observations have been made upon the relative abundance of micro-organisms in natural waters of different origin, and upon their removal by various agencies, both natural and artificial. These researches have resulted in the accumulation of a large amount of information concerning the value of filtration and other processes of water-purification; thus the monthly examinations of the London water-supply, made by Dr. Percy Frankland, and published in Sir Francis Bolton's reports to the Local Government Board, show that the river-waters, in the process of storage and filtration, have the micro-organisms which they contain reduced on an average by ninety-five per cent. before reaching the consumer, and a similar reduction has been observed in the case of the Berlin water-supply, which is periodically examined under the superintendence of Dr. Koch. The biological examination of water has hitherto only in very exceptional cases resulted in the identification of pathogenic forms; nor is there much prospect of such forms being discovered, owing to the enormous preponderance of non-pathogenic organisms which must almost invariably exist. This fact does not, however, in any

way diminish the hygienic value of the results referred to above, as, especially in the case of mechanical processes of purification, there can be no doubt that pathogenic micro-organisms are subject to precisely the same influences as the non-pathogenic. The inquiry into the bacteriology of water has not, however, been allowed to rest here; and, since pathogenic organisms are not, under ordinary circumstances, to be found in water, they have, for purposes of experiment, to be introduced into this medium in such quantity that they can be readily detected by plate cultivation; and then their subsequent fate, under varying conditions of temperature, etc., can be observed by the same method of examination. Dr. Percy Frankland calls attention to the results which have been already obtained in connection with this subject, and which shows that, new as is this field of research, a large number of important facts have already been collected by various investigators. The results which have been obtained show that different organisms are endowed with very different capacities for enduring the conditions afforded by waters of various kinds; nor is it surprising to learn that the greatest contrast is presented by the different forms of one and the same organism, as, for example, the bacilli of anthrax and its spores. Just as in their resistance to antiseptics, to temperature, and to desiccation, so in their endurance in water the spores exhibit a vitality far greater than that which is possessed by the bacilli. Thus we learn that Dr. Meade Bolton has shown that the spores of anthrax remained alive in distilled water for upward of ninety days, and in polluted well-water for nearly a year, while when bacilli alone were introduced into some kinds of potable water they perished in the course of a few days. Koch's "comma-bacillus," again, may survive for some days in potable water of the best quality, and in sewage it would appear to find an excellent culture-medium. This organism, moreover, seems capable of adapting itself to the aqueous medium, for when introduced into water a large proportion of the bacilli are generally destroyed, but the remaining ones then undergo multiplication, and Dr. Wolffhügel has found that when these adapted organisms are further transplanted into fresh water, they do not undergo this preliminary reduction in their number, but commence multiplication at once. These results clearly show how some zymotic diseases may be communicated by potable water of even the best quality, more especially if the micro-organisms, which are the causes of the disease, are capable of forming spores, but even in the absence of such spores. This power of adaptation to a particular medium greatly extends the possibilities of vital activity for organisms which are not known to produce spores.—*The British Medical Journal.*

Stenosis of the Descending Aorta.—Dr. Barié (*Revue de Médecine*) has collected all the cases of contraction of the descending aorta of which records were accessible to him. Added to his own observations, these make a total of ninety-two cases, in eighty-seven of which the facts were verified after death by post-mortem examination. He points out that the localization of the disease is invariably in a position intermediate between the ascending and descending aorta, which corresponds to the aortic isthmus of fetal life, and that the constriction is usually single, but at times double, while it may be gradual or abrupt. When very much developed, the contracted portion resembles a funnel with the narrow end downward. The constriction is formed by a simple fibrous thickening of the walls, by thickened folds of the internal tissue, with swellings projecting into the lumen of the vessel; under other circumstances by a transverse septum perforated by a central or marginal opening, or the narrowing may be by two segments of the artery terminating each in an infundibulum, and joined by a fibrous cord, like two cæca in juxtaposition united by a single patent vermiform appendix. The dimensions of the constriction vary greatly. The proximal part of the aorta is generally much dilated, and has several times led to aneurism and rupture; on the distal side of the constriction it is also sometimes dilated, but this is not constant. Usually the large vessels springing from the transverse aorta participate in the dilatation of the proximal part. The ductus arteriosus is almost always obliterated. In eight cases it was patent as in fetal life, and in one case it was aneurismal. Certain lesions of the heart and great vessels result as a consequence of the stenosis, such as dilatation and hypertrophy of the heart, congestion of the head and upper limbs, with diminution of the blood-supply to the body and lower limbs, which latter is obviated by the increase of the anastomoses between the upper and lower parts of the body. In about thirty-eight per cent. of the cases observed, congenital or developmental anomalies were recorded, and the majority of the cases were of the male sex. There is nothing pathognomonic in the physical signs—evidence of dilatation and hypertrophy of the left side of the heart, with murmurs propagated along the aorta, and distention of the superficial vessels of the thorax being most common. The pulsation of the arteries is increased in the neck and upper extremities, and diminished or absent in the lower limbs, where it is always retarded. The course of the disease depends on the state of the cardiac muscle; the progressive is not grave, and the average age at death in the cases observed is thirty-four. The diagnosis is difficult, and depends on the presence of the dilated vessels aforesaid, and on the difference between the upper and lower circulation; it must be distinguished from mediastinal tumors, aneurisms, and all causes of intrathoracic pressure. All the theories of the origin of the disease involve, on final analysis, an arrest of development of the aortic isthmus, and this appears to be an effect of premature obliteration of the ductus arteriosus, which causes traction and consequent contraction of the aorta.

Case of Sudden Death from a Blow on the Testicles.—Dr. Ivanoff has placed on record the following case: A man, aged between forty-five and fifty, fought with a woman on the street. During the fight the woman dealt a violent blow on his genital organs. The man shouted, "I am dying," staggered, and fell insensible. The author, who was almost immediately fetched to the spot by a policeman, found the patient lying on his back, motionless, pulseless, and breathless, his face, neck, and scrotum being very red. Not a trace of ecchymosis or any other sign of injury was detected anywhere in the man. Since there seemed to be heard a slight cardiac murmur, and a slight tremor to be felt in the carotids, Dr. Ivanoff, without any delay, resorted to artificial respiration. But neither forty-five minutes' manipulations, nor electrolization, could establish the man's breathing. The congested parts soon became livid, and every sign of life extinct. At the post-mortem examination there were found only intense congestion of the meninges and brain, congestion of the lungs, with numerous punctiform ecchymoses, accumulation of dark-red fluid blood in the cardiac cavities, congestion of the stomach, liver, kidneys, and testicles. Everything else was quite normal. Basing his conclusions on all the facts as sketched above, the author stated (forensically) that death followed from syncope, which had been brought about by sudden, violent pain, caused by a blow on the testicles.—*London Medical Record.*

A Large Infant.—Dr. R. C. MacDonald, of Boston, writes that on October 5, 1884, he delivered a woman of a female child weighing eleven pounds. On March 13, 1885, several measurements were taken, giving the following dimensions: Circumference of head, 17 inches; of chest, 19; left arm, 9½; forearm, 6½; thigh, 11½; leg, 8; and waist, 20½. The length of the child was 26 inches. The weight could not be ascertained. The child was perfectly healthy, and though but five months old, could walk pushing a chair before it, and could say "papa" and "mamma."

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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INTESTINAL LESIONS DUE TO THE ACTION OF CORROSIVE SUBLIMATE.

SINCE the general adoption of corrosive sublimate as an antiseptic in surgical and obstetrical practice attention has been called to the intestinal lesions attributable to the action of mercury, and numerous instances have been cited in which injurious effects were supposed to follow the external use of bichloride solutions. When, however, as in the case of surgical operations or in childbed, so many injurious causes are at work, it is not always possible to determine with certainty to which any particular symptoms or lesions may justly be attributed.

Some experiments on animals, instituted for the purpose of settling this question, have recently been conducted by MM. Charrin and Roger, and the results were embodied in a paper presented at a meeting of the Société de Biologie (*L'Union Médicale*, No. 117, 1886). These gentlemen employed aqueous solutions of corrosive sublimate of the strength of 1 to 1,000 and 1 to 4,000, introduced subcutaneously or into a vein. They found that a single dose of moderate size was more productive of injurious effects than was a much greater quantity given in the course of several days in divided doses. The animals presented no special symptoms indicative of intestinal lesions. They became emaciated, had albuminuria, and in rare instances diarrhœa, but there was never any hemorrhage from the bowel. None of the animals died from the effects of the drug, but they were killed at progressive intervals so that the course of the intestinal lesions might be more readily determined. These lesions were always located in the large intestine, and more particularly in the ascending colon and cæcum, though in exceptional cases the proximal face of the ileo-cæcal valve was also affected. The first toxic effects were shown by minute petechiæ, which were also found in the mesentery and peritoneum, on the surface of the kidneys and in the lungs. At a later period the hemorrhage was visible as small areas of ecchymosis, and as submucous streaks of blood, about half a line in width and from several lines to an inch in length, corresponding in direction to the long axis of the intestine. Finally the ecchymoses became more extensive, and ended by breaking down in their central portions, forming black-looking eschars, which became gradually detached, leaving shallow ulcers. In the latter case traces of inflammation were often observed in the corresponding portions of the peritoneum, but perforation of the intestine was never seen.

The principal lesion would thus seem to be hemorrhage, which separates the mucous membrane from its attachments to the other coats, and deprives it of its nutrition. The ulcerations are not due to alterations of the glands, caused by the elimination of the poison, but, as seen above, to defects in nutrition of portions of the mucous membrane and the consequent death and separation of these areas.

In order to produce these results in man a single dose of three and a half grains, or the larger dose of nine grains, given in divided amounts in the course of five days, would be required. It could scarcely happen that so large a quantity of corrosive sublimate should be absorbed from the surface of a wound during irrigation with solutions of the ordinary strength. It is not improbable, however, that man is much more susceptible to the action of mercuric chloride, in proportion to his weight, than are the smaller animals. But even admitting the possibility of hemorrhage under the mucous coat of the intestine, caused, under certain circumstances, by absorption of sublimate solutions, nevertheless the chances of such an accident are slight, and would not warrant the rejection of so valuable an antiseptic in the treatment of wounds. It is well, however, to remember that carbolic acid tends to retard the elimination of the bichloride of mercury by the kidneys, and hence it is better not to employ these two antiseptics at the same time. For, although the lesions are not glandular, nevertheless increased excretion of the mercurial through the intestine would doubtless tend to aggravate the submucous hemorrhages.

NOT A GOOD OPENING FOR A PHYSICIAN.

THERE are not many places in this country which may be said to present very promising openings for physicians, but some would seem to offer even less inducement to the young medical aspirant than others. A correspondent writes us from Southern Kansas that that portion of the world is already only too amply supplied with doctors of all sorts and conditions, and of all grades of talent and experience. Not only, it would appear, are the cities and settled parts of the State crowded, but even the open prairies are overrun with doctors, where as yet a grasshopper with a broken leg affords the only opportunity for the exercise of the healing art.

Our correspondent writes: "As a result of our rapid railroad building, new villages are being located every few days, and it is not the rarest of sights to see one or two physicians hovering like shadows around a town which for the time being exists only on paper. These 'too previous' aspirants frequently board at country houses, daily visiting the patch of waving prairie-grass, the site of the prospective metropolis, and waiting sometimes for weeks before buildings are erected in which offices can be had. The other day I overheard a travelling man urging a physician to move *at once* to a new town just located on an extension of the Santa Fé Railroad. The town at present is a prosperous cornfield—the railroad will reach it in three months. By that time, perhaps, half a dozen buildings will be in process of erection."

There is no law in Kansas which properly regulates the practice of medicine, and consequently quacks driven out of other States find there a welcome refuge, where they may practise their self-taught art in peace, if not in plenty. Some of these men will examine the patient and furnish all the necessary medicines for from twenty-five to fifty cents, and will make a visit at a distance of three or four miles for a dollar. But as no time or money has been spent in the acquirement of the knowledge which is by some deemed necessary for a physician, they probably receive all or more than their services are worth. They are undoubtedly able, however, to write a prescription for spiritus fiumenti, which we understand is now the most popular drug in Kansas, and consequently they are not wholly without their use to the community.

The following is a picture of one of these ornaments of the profession, drawn not wholly from the imagination:

"His education evidently never cost him anything, for usually he hasn't any. His library might most likely be stowed away in his trousers pocket, and still leave room for the indispensable pipe and twist of home spun tobacco. His whole armamentarium consists of half a dozen bottles, of all sizes and shapes, poked into various nooks and crannies about his clothing. He has no instruments or appliances, and he disdains surgery, on the same principle that the negro regarded the rabbit he couldn't get, as 'dry meat anyhow.' He scorns 'book larnin',' knows how to look very wise and oracular when occasion requires, and is never tired of relating wonderful cures, and boasting of his 'extensive experience.' He has few financial embarrassments. Most likely he is living on the 'quarter' he 'entered' years ago; and while he is dangling his heels against a dry-goods box and retailing medical lore to his admirers, his wife is probably at home herding the cow or digging the winter's supply of potatoes."

But in addition to the sharp competition with quacks there are other drawbacks which physicians are compelled to meet in Kansas. The country is healthy much beyond the average of adjoining States, and the farms are large—from one hundred and sixty acres upward—making the rural districts comparatively thinly settled. "The incomes obtained by even sober, industrious, reputable physicians are, outside of the large cities, small. Probably seventy-five per cent. do not obtain five hundred dollars a year from their professional work."

This is, indeed, a discouraging picture which our correspondent draws, and it is one that is not calculated to incite many physicians to emigrate to Kansas. Yet many in the East would esteem themselves fortunate were they in the receipt of an income as large, proportionately to the cost of living, as that of the bulk of the profession in Kansas. The fact is, as is well known, the profession is overcrowded everywhere. Even of educated regular physicians there are too many in proportion to the population, and when to this number are added the hordes of quacks, with or without diplomas, the competition is too great, and some must go to the wall, while others struggle along, barely earning their daily bread, and regretting when too late that they had not fitted themselves for some other more lucrative calling.

DISPENSARIES THAT ARE NOT NEEDED.

New York City has over forty free dispensaries, in which about 350,000 patients, or one-fourth the population, receive treatment annually. The number of dispensaries is continually increasing. Within the last three or four years we recall the establishment of four institutions, each of which treats already not far from 5,000 patients annually. Besides this a large number of smaller dispensaries are continually cropping up, to lead a more or less thriving existence.

We need not say, in view of these facts, that the dispensary system is being overdone, and that it is working injury both to the poorer classes and to the profession.

An excellent illustration of how these new dispensaries originate is shown in the present attempt to organize an "Out-patient Department" in connection with the Presbyterian Hospital. This hospital is situated in the brown-stone district, at least half a mile from a tenement-house population, and with no easy means of communication. The sick must either walk to the place or come in carriages.

In the neighborhood are already two large dispensaries, Mt. Sinai and the Northeastern, and several smaller ones, treating annually over 65,000 patients. The establishment of another dispensary is most unnecessary, and is an entirely gratuitous offer to the poor of free medical service. While it is established in the name of charity, it is in reality meant as a "feeder" to the hospital, so that at the time of the annual report the managers can "point with pride" to the larger number of patients treated and "benevolent work" done, with a request for correspondingly larger subscriptions. Such unnecessary dispensaries as this are simply for the glorification of hospital managers, and to the injury of the poor. They are already discountenanced by the profession, and it is quite time that charitable people understood the true inwardness of the matter. In the case of the Presbyterian Dispensary that is, or is to be, there is not even the excuse of a need for clinical instruction. It is another of the too numerous charities that are conceived in hypocrisy.

FERRÁN'S LATEST WORK ON CHOLERA.

We have received a volume of upward of 350 pages, entitled "La Inoculación Preventiva contra el Cólera Morbo Asiático," written by Dr. James Ferrán, with the assistance of Drs. Gimeno and Pauli, in which is contained the complete history, from the author's point of view, of the so called preventive cholera inoculations. The work is divided into six parts, in which are discussed the doctrine of parasitism, the nature of microbial infection, the effects upon the organism of attenuated virus, the nature of the symptoms caused by cholera inoculation, the mode of procedure employed in "cholerization," and the value of the same in preventing the disease. The last part contains the reports of the various commissions sent to study Ferrán's method, and of the individual investigators who visited Spain at the time of the cholera epidemic, to satisfy themselves concerning the value of inoculation. The volume ends with an appendix containing the statistics of cholerization as practised in the different towns visited by the scourge.

These statistics were presented to our readers at the time when they were first published in separate form, and we expressed our conviction then that they were not sufficiently strong to warrant us in accepting without further proof the author's assertions. We need not refer to these again, but will review briefly Ferrán's conclusions concerning the present state of the question, leaving the reader to judge as to the soundness of the author's argument.

It is time, he thinks, now that the period of heated discussion has passed, to review the subject calmly and judicially, and to pass upon its merits without bias and without passion. He recognizes the fact that his theories have not met with the universal acceptance which he would wish that they might, and he is fully aware that he is looked upon by many as a "vulgar charlatan;" yet he believes that an impartial study of his methods, and of the results obtained, will convince anyone not blinded by prejudice or jealousy that he is right. The statistics are before the world, and they can be denied only by impugning the credibility of the physicians, municipal authorities, and parish priests who have certified under oath to their correctness. The whole question, he maintains, rests upon the acceptance of two propositions, viz.: 1. Does preventive inoculation by cultures of the comma-bacillus rest upon a rational scientific basis? 2. Do the results thus far obtained warrant the belief that Ferrán's prophylactic method is the true one? Naturally the author himself would answer these two questions in the affirmative, and he believes that no impartial critic can do otherwise.

Whatever may be the final judgment of the scientific world upon this method, we believe that Ferrán is sincere in his convictions, and we only wish he were as scientific in his methods as we believe him to be honest in his intentions.

TREATMENT OF PHTHISIS BY RECTAL INJECTIONS OF SULPHUROUS GAS.

M. L. BERGEON has communicated to the Académie des Sciences the description of a new therapeutic measure, from which, he informs us, he expects great results. The measure is based upon the physiological fact established by Claude Bernard, that the introduction of toxic substances by the rectum does not offer so much danger as when introduced by the mouth, so long as pulmonary elimination is not interfered with.

M. Bergeon also established the fact that a current of pure carbonic acid gas can be safely introduced in very large, and indeed almost indefinite, amount by the rectum, provided it be done slowly and with proper precautions.

After trying various agents, such as balsams and antiseptics, the experimenter finally settled on the sulphurous waters as promising to do the most. A current of four to five litres of carbonic acid gas was passed through from half a pint to a pint of sulphurous water, and then introduced twice daily into the intestines.

The results of applying this method in phthisis were: (1) after some days a diminution, amounting almost to suppression, of cough; (2) a profound modification of the quality and quantity of the expectoration; (3) a suppression of the sweating, and a gradual disappearance of moist râles; (4) an improvement in the general condition, both in the early stages and in confirmed phthisis.

M. Bergeon thinks that his results have been sufficiently encouraging to warrant his asking that they be "controlled" by other physicians.

CUTTING THE DIAPHRAGM IN OPERATIONS FOR EMPYEMA.

IN the *Archives generales de Médecine* for September Dr. F. Lagrange, of Bordeaux, calls attention to an accident that may occur in connection with the operation for empyema. As the tendency to open the chest in severe empyema is growing, under the stimulus of antiseptic surgery, the lesson of M. Lagrange's case and of the others which he has collected is timely. The patient in question had suffered from acute purulent pleurisy, and had been aspirated several times without producing any improvement in his condition. An incision was therefore made in the eighth intercostal space on the left side, and a large accumulation of pus was removed. The patient died next day with symptoms of peritonitis. A post-mortem examination showed that the incision had penetrated through the diaphragm into the abdomen.

The author collects a number of cases in which a similar accident has happened, and this not only when simple incisions were made, but also when the trocar had been used or a rib resected. The diaphragm has been cut through by Hanot in a puncture and incision in the eighth intercostal space, by Girgensohn in an incision in the sixth intercostal space. Brunnische drove a large trocar through the tenth interspace into the abdominal cavity. Reynaud and Dieulafoy did the same, making the puncture in the ninth space. Jaccoud drove a trocar through the eighth intercostal space directly into the heart (*Cliniques Médicales de la Pitié*, 1884). In resecting the rib the diaphragm has been incised by Kirmisson (tenth rib), Bouilly (ninth), Leeseman (fifth), and Wagner (tenth).

It appears, therefore, that the diaphragm in suppurating pleurisy is not always depressed, but may even be elevated and adherent to the chest-wall. Authorities differ diametrically as to whether this condition can be diagnosticated by physical signs before the operation.

At any rate, the practical conclusion drawn is that in the operation for empyema the incision should never be below the fifth intercostal space. It should be remembered that French writers have almost uniformly recommended low incisions, *i.e.*, in the ninth, tenth, or eleventh intercostal space, Moutard-Martin being the only author quoted as recommending even the eighth interspace. American physicians have generally made the incisions somewhat higher.

THE LESIONS OF THE SKIN IN SCARLATINA.

IT is generally supposed that the anatomical changes in the skin in scarlet fever are confined to the superficial layers; but a Russian physician, Dr. Mandelstam, of Kazan, has recently made a series of investigations, quoted in *El Sentido Católico*, the results of which would seem to show that the lesions are much more deeply situated. He examined microscopically numerous sections of skin

taken post-mortem from children with scarlatina, who died from collapse, intercurrent diphtheria, or nephritis.

As a result of these investigations the author states that the pathological process is of an inflammatory character, and involves the horny layer, the rete mucosum, the papillæ, and the connective tissue of the corium. It is manifested by a more or less intense hyperæmia, accompanied, in certain cases, by œdema of the subcutaneous connective tissue, and infiltration of the lymphoid elements. The sudoriferous glands are also affected. Their limiting membrane is swollen and their ducts are obstructed by detritus, formed by the destruction of the epithelial cells. There is also an abundant infiltration of leucocytes in the periglandular tissues. In no instance did Dr. Mandelstam find the verticillium candelabrum, asserted by some to be the specific micro-organism of scarlet fever.

This is an interesting subject for further investigation, for the cutaneous lesions have not hitherto been regarded as so important or so extensive as this observer has found them to be.

PROGRESSIVELY INCREASING MORTALITY OF THE CÆSAREAN OPERATION IN THE UNITED STATES.

Dr. Robert P. Harris states, as a result of the study of statistics collected by him, that he finds the mortality, in this country, of the Cæsarean operation is greatly increasing. In the decade 1846 to 1855, for example, there were 25 operations, with 12 women and 13 children saved. These figures have gradually grown worse, until in the years 1876 to 1886 the record is 37 operations, with only 8 women (?) and 16 children saved.

On the other hand, during the past year European operators have saved 18 out of 20 women, and 19 out of 20 children. Dr. Harris thinks that our obstetricians lack in a knowledge of pelvimetry.

Dr. Harris got his European statistics presumably from journals only, while of his American statistics nearly one-half were communicated privately. Hence his comparison is perhaps not quite fair.

ADVERTISING OPERATIONS IN THE PAPERS.

The suggestion of the Committee on Ethics, of the Medical Society of the County of New York, concerning repression of the growing tendency to publish surgical operations in the newspapers is timely, and should receive the unqualified support of every practitioner of medicine and surgery. The names of everyone of those who have heretofore winked at this breach of propriety and good sense are well known, and whenever the subject is brought up they are promptly enumerated as the recognized violators of what honorable professional gentlemen endeavor to sustain and maintain. These trenchers upon the good name of the profession can, with perfect safety, assure themselves that they do not occupy an enviable position.

THE QUESTION OF ADVERTISING A SPECIALTY.

A correspondent writes: "Will you please inform me, as soon as convenient, whether the American Medical Association, at their last meeting, changed the Code of ethics, so that a specialist can state on his card or sign his specialty."

The American Medical Association has made no change in its Code of Ethics, but the fountain-centres of ethical knowledge connected with the Association in question have declared that physicians may print on their cards the announcement, "Practice limited to ——," whatever specialty the physician does limit himself to.

This practice, however, is not sanctioned by the profession in general, and fortunately is not widely adopted. It opens the way to a great deal of abuse, and may speedily bring the physician to the level of the ordinary advertising charlatan.

News of the Week.

The Cholera in New York.—Asiatic cholera has reached New York at last, but fortunately it was brought in the luggage of an enterprising mycologist, hermetically sealed, and confined to the innutritious surface of sterilized agar-agar.

A Game of Baseball was played last week between the students of the College of Physicians and Surgeons and those of the Homœopathic College of this city. The disciples of regular medicine were sadly beaten by their light-pellet opponents.

The State of Tennesske hopes to have a law regulating the practice of medicine. A committee of the State Society has been appointed to prosecute the matter, and a circular presenting the subject has been issued to the medical profession of Tennessee. Dr. F. M. Sim is the efficient chairman of the committee.

Massage.—Dr. Octavius Sturgis thinks that the massage agitation is going rather too far, and that the field of usefulness of this measure is not wide. He especially ridicules the idea of having massage schools, and thinks that persons with any natural aptitude for the practice can learn it in a few lessons.

Venereal Infection Pronounced a Crime.—Some consternation may be caused among a certain class by a recent judgment of Justice Wills, of the Central Criminal Court, England. The charge against the prisoner was on two counts, one with having had carnal knowledge of an imbecile woman, aged eighteen, and another, under 24 and 25 Vict., c. 100, s. 47, for a "fraudulent assault" upon the same woman, occasioning her actual bodily harm. The harm done was the wilful infection with syphilis. The prisoner was found guilty on both heads, and sentenced to two years' imprisonment for the first, and five years for the second. The more remarkable piece of information is that a man who has immoral sexual connection with a woman, knowing himself to be suffering at the time from gonorrhœa or syphilis, is liable to prosecution and penal servitude.

Hydrophobia does not exist in Lapland; but two dogs brought from that country having been inoculated by M. Pasteur, contracted rabies, proving that Lapland dogs are not refractory to the disease.

South Africa is agitating the question of establishing a Frontier Medical Association.

Officers of the Washington Obstetrical and Gynecological Society for the ensuing year are: A. F. A. King, M.D., President; S. C. Burey, M.D., and W. W. Johnston, M.D., Vice-Presidents; H. M. Cutts, M.D., Recording Secretary; S. S. Adams, M.D., Corresponding Secretary; George Byrd Harrison, M.D., Treasurer.

New York Post-Graduate Medical School and Hospital.—Dr. David C. Bryan of the Almshouse Hospital, New York, has been appointed Demonstrator of the Normal and Pathological Anatomy of the Nervous System in the New York Post-Graduate Medical School and Hospital.

Chloral Hydrate as a Vesicant.—Dr. Ivanovski recommends chloral hydrate as a vesicating material. He takes a piece of adhesive plaster and puts in the centre of it some powdered chloral, taking care to leave an uncovered margin. The plaster is then held over a flame until the chloral is melted, and is then applied to the previously oiled skin. In from ten to fifteen minutes a large blister will be formed, at the expense to the patient of only a slight burning sensation. The chloral should not be allowed to remain in contact with the skin longer than fifteen minutes, as there is then danger of causing ulceration.

Inter-State Notification in Infectious and Contagious Diseases.—The following resolutions, presented by the National Conference of State Boards of Health, were adopted by the American Public Health Association at Toronto, October 8, 1886:

Whereas, It is necessary for the protection and preservation of the public health that prompt information should be given of the existence of cholera, yellow fever, and small-pox; be it

Resolved, That it is the sense of the National Conference of State Boards of Health that it is the duty of each State, provincial, and local board of health, in any locality in which said diseases may at any time occur, to furnish immediately information of the existence of such disease to boards of health of neighboring and provincial States, and to the local board in such States as have no State board.

Resolved, That upon rumor or report of the existence of pestilential disease, and positive definite information thereon not being obtainable from the proper health authorities, this Conference recommends that the health officials of one State shall be privileged and justified to go into another State, for the purpose of investigating and establishing the truth or falsity of such reports.

Resolved, That, whenever practicable, the investigations made under the preceding section shall be done with the co-operation of the State or local health authorities.

Resolved, That any case which presents symptoms seriously suspicious of one of the aforenamed diseases, shall be treated as suspicious, and reported as provided for in cases announced as actual.

Resolved, That any case respecting which reputable and experienced physicians disagree as to whether the disease is or is not pestilential, shall be reported as suspicious.

Resolved, That any case respecting which efforts are made to conceal its existence, full history, and true nature, shall be deemed suspicious and so acted upon.

Resolved, That in accordance with the provisions of the foregoing resolutions, the Boards of Health of the United States and Canada represented at this conference, do pledge themselves to an interchange of information as herein provided.

Irving A. Watson,
Secretary American Public Health Association.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 25, 1886.

Daniel Lewis, M.D., President, in the Chair.

The *Comitia Minora* reported that the delay in the publication of

THE MEDICAL DIRECTORY

was presumably due to causes which could not be controlled by either the editor or the publishers, and that it was believed that, in the light of the experience now obtained, the book can be published next year so as to be satisfactory to the large majority of its readers.

THE TREASURER'S REPORT

showed a balance in the treasury of $385.41.

THE REPORT OF THE BOARD OF CENSORS,

together with the report of the Counsel, W. A. Purrington, Esq., showed that the work of prosecuting illegal practitioners has been carried on with unabated success, and that over two hundred cases have been investigated, and all who have been guilty of violation of the law have been convicted and punished.

THE REPORT OF THE COMMITTEE ON HYGIENE

showed that, aided and sustained by the Health Department, the Committee had obtained the system of drainage of the whole Croton area, and the removal of all the nuisances which polluted the Croton water-supply.

However imperative it might be to have more water, the committee insisted that the *new* supply should be as pure as money and skill could make it, and that the purity of the old supply should be improved.

THE REPORT OF THE COMMITTEE ON ETHICS

suggested that some action be taken by the Society *to repress the growing tendency to report surgical operations in the lay press.*

The Committee on Prize Essays reported that no essays had been submitted.

OFFICERS FOR THE ENSUING YEAR.

President—Laurence Johnson, M.D.; *Vice-President*—Frederick R. S. Drake, M.D.; *Secretary*—Wesley M. Carpenter, M.D.; *Assistant Secretary*—Charles H. Avery, M.D.; *Treasurer*—Orlando B. Douglas, M.D.

Censors—Daniel Lewis, M.D., H. T. Peirce, M.D., W. E. Bullard, M.D., W. O. Moore, M.D., and J. S. Warren, M.D.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Drs. L. B. Bangs, S. S. Burt, A. N. Brockway, C. E. Bruce, J. L. Corning, H. E. Crampton, A. F. Currier, W. B. De Garmo, O. B. Douglas, E. D. Fisher, G. M. Hammond, N. J. Hepburn, L. E. Holt, H. P. Loomis, W. M. McLaury, J. A. Moore, W. O. Moore, P. A. Morrow, H. T. Peirce, W. C. Phillips, C. C. Rice, F. W. Ring, S. O. Vander Poel, R. Van Santvoord.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 21, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THIRTY THOUSAND DOLLARS FOR THE ACADEMY.

DR. GEORGE A. PETERS, Secretary of the Board of Trustees, reported that the Academy had received five thousand dollars from the estate of the late DR. BEADLE; that it had received, through the President, a check from MRS. ANNA WOERISHOFFER for twenty-five thousand dollars in memory of her husband, Mr. C. F. Woerishoffer.

THANKS TO MRS. WOERISHOFFER.

DR. FORDYCE BARKER offered a series of resolutions extending the warmest thanks and gratitude to Mrs. Woerishoffer for her most generous gift, and also providing for the entry of the names of Mr. and Mrs. Woerishoffer in the books of the Academy, as benefactors.

In the course of a few remarks on the resolutions Dr. Barker said that only *thirty-nine* more such subscriptions as this were required to furnish the *million of dollars* which he bespoke for the Academy in his address on retiring from the presidential chair, and he felt quite sure that it was entirely through the influence of the present incumbent, Dr. Jacobi, that the munificent donation just received had been obtained.

The Statistical Secretary, DR. A. B. JUDSON, announced the death of

JAMES ANDERSON, M.D.,

ex-President of the Academy, at the advanced age of eighty-seven years. He was continuously in office from the years 1849 to 1875, and was a generous contributor to both its library and building fund.

THE PRESIDENT wished to state that neither the Secretary nor the President received a personal notice concerning the death of his distinguished predecessor in office, Dr. Anderson, and thus no official notice of his death and funeral appeared in the newspapers.

The Secretary also announced the death of Dr. William Henry Dudley, of Brooklyn, N. Y.

DR. JOHN C. PETERS, Chairman of the Library Committee, reported that

THE LIBRARY HAD RECEIVED

since the last meeting three hundred and five bound volumes, of which two hundred and thirty-four were from the library of the late Dr. Alfred S. Purdy.

PULMONARY EMPHYSEMA.

DR. FRANCIS DELAFIELD then read a paper on the above subject (*vide* page 477).

DR. E. DARWIN HUDSON, JR., regarded the paper as essentially a pathological presentation of the subject. He had seen and studied a large number of sections of emphysematous lungs, but the illustrations which, to his mind, gave the most definite description of the disease had been those of Waters, of Liverpool. Uniting the clinical with the pathological history of the affection, he was still of the opinion that emphysema is essentially a dilatation of the terminal bronchi and air-vesicles, and rarefaction of pulmonary structures. He thought that certain cases of rapidly developing emphysema gave an instance that could hardly be explained by the theory of chronic inflammation. Also, the results of treatment had confirmed the theory that emphysema is associated with mechanical causes. The positive results of treatment by the pneumatic cabinet, he believed, had shown that emphysema is a disease, in a large number of cases, in which there is a loss of resiliency in the structure of the air-sacs. Certainly, there was no more perplexing disease to treat than pulmonary emphysema. It seemed to him that the illustrations given by the author of the paper showed a complication of diseases—dilatation of air-sacs with mucus, and submucous inflammation and tubercles.

DR. HEITZMANN said that it is now about fifty years since the history of pulmonary emphysema was made out exactly, through the efforts of Rokitansky. The clinical features are just as well known, and he learned them exactly as Dr. Delafield had given at the beginning of his paper, and as they exist in text-books. He had also examined a large number of lungs in the condition of emphysema, and it seemed to him, from what had been shown upon the screen, that Dr. Delafield either had not seen cases of pure substantive emphysema, or had not demonstrated it; for there was no substantive emphysema at all in most of the sections, but merely a combination of emphysema with chronic interstitial pneumonia, tubercle, etc., as Dr. Hudson had said. Dr. Heitzmann said that he had specimens which would show pure substantive emphysema without the least trace of inflammatory process, and he therefore thought that there was not the least reason for discarding the old views as to its origin. He did not see why resort should be had to something that could not be proved, that is, contraction of arteries, to explain the disease.

DR. VAN SANTVOORD had recently had two cases which appeared to bear out Dr. Delafield's views with regard to the exceeding gravity of the affection, and which overturned his student ideas concerning its trifling importance. The only point to which he would refer was the use of caffein as a cardiac stimulant. The right heart, in both cases, was very much embarrassed, and secondary venous congestion occurred, as it frequently does long before tricuspid regurgitation exists, mentioned by Dr. Heitzmann, so as to be recognizable by auscultation. In these cases caffein had served him better than any other remedy that he had employed.

THE PRESIDENT asked if the change which Dr. Delafield had described was at all analogous to what occurred in the larger bronchial tubes with bronchiectasis. What occurred there as the result of inflammation had taken place, in the specimens which he had seen, near and around the air-cells.

Again, are all cases of emphysema of the same nature? Some cases occur acutely, a part of which are transient and a part become permanent.

With regard to treatment, he would say that the iodides would be proper remedies to use in those cases which result from chronic interstitial inflammation, because they act as absorbents.

DR. F. A. CASTLE referred to the possible utility of the calcium chloride in promoting absorption of connective-tissue formations, and also to the value of remedies that relax involuntary muscular fibre present in the coats of the blood-vessels. For example, since the use of nitrite of amyl patients had experienced such relief from the distressing symptoms of pulmonary emphysema, as would seem to indicate that the seat of the trouble was in the blood-vessels.

DR. DELAFIELD, in closing the discussion, said he intended that his paper should have a clinical standpoint, as he thought it hardly possible to disassociate the two conditions, the clinical and the pathological. His clinical ideas of pulmonary emphysema coincided with the conditions of the lungs which he had found after death, and the results of his treatment of the disease seemed to him to be fully compatible with the views which he had advanced and the conditions of the lungs that he had illustrated, and the specimens were taken from cases in which the diagnosis was perfectly plain.

With regard to caffein, he regarded it as a good drug for the purpose mentioned by Dr. Van Santvoord, as it stimulated the right much more than the left side of the heart. Convallaria acts very much as does caffein.

The condition of bronchiectasis, referred to by Dr.

Jacobi, was quite analogous to the change which he had described as involving the parenchyma of the lung. In his paper reference was made only to *chronic* emphysema; the cases of sudden development did not enter into his consideration of the subject.

With regard to iodide of potassium, which is one of the most reliable drugs, it may be supposed that it does part of its good by its effect upon the blood-vessels. One of its effects is to relax the smaller arteries and capillaries. Still further, there is another drug of the same class which acts in the same way, by dilating the smaller arteries and the capillaries, and that is chloral hydrate; in large doses it will check the asthmatic attacks, and in small doses it will very much moderate the constant dyspnœa.

The Academy then adjourned.

SECTION IN PRACTICE.

Stated Meeting, October 19, 1886.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

CARLSBAD FROM A MEDICAL POINT OF VIEW.

DR. R. C. M. PAGE read a paper (see p. 479) on the above subject which was discussed by DR. T. MUNSON COAN, who endorsed the view that the beneficial results obtained by treatment at Carlsbad were due to the combined effect of the waters and the hygienic measures. He thought it was an error, perhaps, to assume that the combined influence could be obtained at home. In theory it could, but practically it had not and could not at present be applied, for the patients would not adopt at home the plan of treatment which they would willingly subject themselves to at these watering-places.

The discussion was continued by DR. A. JACOBI, who said that patients would not obey the physicians' orders while at home, but would go to Carlsbad or elsewhere, and get their money's worth in a certain degree of recovery. He related a case of diabetes, occurring in a woman who was fond of good living and would not restrict her diet. She went to Carlsbad under his directions, and, although during the last twelve years her urine had contained sugar in quantities as high as five and seven per cent., she returned to New York with only a trace of sugar in the urine, but with the admission that the physician at Carlsbad had her do just what her physician at home had been trying to get her to do for years, and had not fully succeeded.

In a large number of cases sugar in the urine is temporary, and, when occurring in fat persons with gouty tendency or habit, is due to hepatic disorders, which can be benefited by treatment at Carlsbad. The fact remains, however, that patients will not do at home what they will do there. As a substitute for these natural mineral waters he had used, with good results, sulphate of soda with sulphate of magnesia, well diluted with plain water or Apollinaris, given before meals in cases of acid dyspepsia, to neutralize acids other than those belonging to normal digestion. Benefit may be derived in this way, even though pepsin with muriatic acid may be required after meals to complete the digestive process.

DR. CHARLES A. DOREMUS said that he had analyzed Carlsbad salts prepared and sold at Carlsbad, and also Carlsbad water, and had found that the salts were almost wholly sulphate of soda, and that the proportion of salts to the proportion of alkaline carbonate is very much greater in the water than exists in the Sprudel salt. The salts, therefore, do not represent the water. If pure Glauber salt be added to the alkaline carbonate and common salt, it will more nearly approach the natural water than the Carlsbad salts sold in the drug stores.

DR. KINNICUTT had found a very good formula to consist of 50 parts of sulphate of soda, 20 parts of bicarbonate of soda, and 10 parts of chloride of sodium.

He had not seen any benefit whatever arising from the use of the Carlsbad waters in diabetes.

DR. PAGE, in closing the discussion, said that he did not believe that Carlsbad waters cured diabetes in any form. The special points which he wished to make in his paper were that patients should not be sent to Carlsbad indiscriminately, and that if they would obey orders they could get just as much benefit here as there.

DR. WILLIAM M. CHAMBERLAIN then read a paper (see p. 482) on

THE SANITARY AND CLIMATIC CONDITIONS OF SOUTHERN CALIFORNIA.

DR. AGNEW was invited to open the discussion, and said that while his journeying had not been beyond New Mexico, and, therefore, he was unprepared to speak from personal observation, yet he regarded Dr. Chamberlain's paper as one of the best contributions to our knowledge of the subject which he had ever heard.

DR. W. R. BIRDSALL had had some experience in the region of country included in Dr. Chamberlain's paper, and while he would agree with him on many points, there were some on which he would differ with him most decidedly. This difference of opinion was the result of personal observations and repeated communications with those residing in that locality.

He objected to sending cases of pulmonary phthisis to Southern California, because of the lack of two important elements, namely, altitude and dryness.

For nine months in the year there is a relatively greater humidity at San Diego and Los Angeles than in New York, notwithstanding the slight amount of rainfall. He believed that the greater number of cases of pulmonary phthisis, in the early stages, do better under conditions of extreme dryness and higher altitude than can be obtained in most of the towns mentioned in Southern California. It is a delightful place to live in, but he did not regard it as favorable for diminishing expectoration and the development of bacteria, and would prefer the arid region of New Mexico and upward to Colorado.

With reference to the absence of malaria, he had become convinced that there was more of malarial diseases in Southern California than had been generally supposed. He had seen the inhabitants laboring under well-marked chills of intermittent fever, and he believed also that the system of irrigation would so modify the climate that malarial fever would prevail.

DR. LANGMANN would advise against sending consumptives to Southern California, because he regarded the climate as neither dry nor warm, and while he did not wish to dispute the figures given, he was unable to understand how there could be less cloudiness at Los Angeles than in New York, while it was a uniform law that cloudiness is less upon the eastern than upon the western coasts of continents. Equable climates are necessarily moist climates. Another significant fact, concerning pulmonary phthisis, was that the State Sanitarium for Consumptives had been located to the north of San Francisco.

DR. CHAMBERLAIN said that he quite agreed with Dr. Birdsall, that cases of phthisis characterized by free expectoration did not do well upon the *coast* of California. But he had entertained the opinion that cold dampness was something different from a comfortably warm moisture. His observations certainly differed very broadly from Dr. Birdsall's concerning humidity, for while Dr. Birdsall's observations, like his own, might relate to a single season, certainly during last winter the relative humidity of the air was not more than 55, average, while the mean on the coasts all over the world is between 70 and 76.

He agreed with Dr. Langmann that an equable climate, in general, must be a moist climate; but in this particular he thought that Southern California formed a remarkable exception, because when the air of the sea reaches the bare rocks of the foot-hills, which rose

precipitously, the reflected heat drove out the moisture very largely.

The fact that the State Hospital for Consumptives is not located in Southern California may be accounted for by the constant and declared purpose to separate and set up as a new State. None of the State institutions, he believed, are locoted in the southern part of the State, far remote from centres of business and population of the State as a whole.

He also agreed with Dr. Birdsall, that cases of phthisis with free expectoration would do better at Banning, but, on the other hand, those marked by a dry cough of bronchial irritation will be benefitted by a climate as moist even as that of San Diego.

With regard to the prevalence of malarial diseases, he quoted the statements of the post surgeons at San Diego and Los Angeles, and the record of the Signal Service Bureau, which is presumed to be scientific truth without prejudice or favor. He heard of cases of house malaria, and of endemic malaria from bad municipal conditions, but of malaria from paludal conditions he was inclined to believe that there was but very little in Southern California.

He could not agree at all with the view that a high, rocky region would be found to be good for phthisical patients, because the diurnal variations in temperature are too great, being between 30° and 40°; besides, the dust storms load the atmosphere with material which, he believed, would be found to be productive of serious mischief.

The Section then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MORE INTRODUCTORY LECTURES—MIDDLESEX HOSPITAL—WESTMINSTER HOSPITAL—UNIVERSITY COLLEGE—PROFESSOR ACLAND AT THE SCHOOL OF PHARMACY—THE PHARMACOPŒIA—PRIZES AND SCHOOL DINNERS.

LONDON, October 8, 1886.

I SENT you last week some notes on the introductory lectures which had so far been delivered. The remainder duly came off according to announcement, and have furnished pabulum for conversation through the week. Of course, most of them had remarks to make on the curriculum, but as this became more and more straightened, and the examinations more frequent, students have less and less power to vary it.

At the Middlesex Hospital the address was given by Dr. Biss, who spoke in most favorable terms of the new residential college which has just been opened, and congratulated new-comers on the profession they had chosen and which is continually rising in public esteem, at the same time urging upon them thrift of time, on account of the growing impossibility to make up for any loss or waste. He said there was in medical study a special faculty to be trained, viz., that of close observance and the power of correct reasoning upon the facts observed. Without this faculty no one could be a really able physician or surgeon; the senses must be trained in observing facts. Students were advised to learn their anatomy from the structures themselves, and by noticing the grouping of its facts they would render them suggestive and interesting. As an illustration, nerves which supply muscles enter them at the point where they are the most secure from pressure, as the phrenic nerves—the threads on which our lives hang—pierce the diaphragm to be distributed upon its under surface where the influence of gravitation is to relieve them from the pressure of adjacent organs. Facts of this kind naturally grouped do not burden the memory like ridiculous "tips" and jingling rhymes, and are of use elsewhere than at the examination table. Dr. Biss expressed a fear that with all our progress the precious hours devoted to physiology are too often swallowed up by that fascinating thief of time, section cutting and staining, while problems of pure physiology are not considered as they ought to be in view of their future application. He believed the day will come when the relations of pathological to normal functions will be more constantly studied together, the result being more useful. He warned his hearers against routine and the danger of degenerating into mere distributers of drugs.

At the Westminster Hospital the address was delivered by Mr. James Black, who offered some practical advice to beginners and some suggestions as to their future. He held that there ought to be time for out-door exercise and recreation in order to develop the student's body as well as his mind, and he commended those who carried off prizes and appointments. He also recommended everyone to have a favorite pursuit apart from his medica study, and suggested music and drawing as well worthy their attention, remarking that the discoverer of vaccination whiled away many a weary hour with his flute or violin; and he quoted Dr. Oliver Wendell Holmes as saying: "Literature is a good staff to walk with, but not to lean upon." To those, however, who could not play, or could not help working, even at the expense of their bodily powers, he urged the duty of systematically taking a good night's rest and strictly observing the Sabbath. As to future prospects, he congratulated them on the prospect that the conjunction of the two colleges would shortly enable them to take their M.D. in London on the same conditions as at other places—an expression which, coming from a Cambridge graduate, exemplifies the injustice from which London students have too long suffered. Not only Mr. Black, but most other teachers, will shortly be crying out more energetically, unless relief speedily comes, for I hear in various directions that the new entries are very unsatisfactory, many men having migrated to schools where they can crown their curriculum with the M.D.

At University College Mr. A. E. Barker delivered the address, and opened by defending these lectures on the ground that they afford an opportunity of offering new students a hearty welcome from their teachers.

But nobody doubts this welcome; for fresh students bring fresh fees, and most of the young men are worldly wise enough to understand that their teachers have no objections to increase their incomes. Mr. Barker devoted a good deal of attention to the relations of medicine to society and to the State. He said the public need to be reminded that their lives are protected and protracted, and their happiness increased, by the discoveries of medical science. Referring to charges sometimes made against our profession, he said that none was less liable to the reproach of being carried on in defiance of reason, while the opposite aspersion of materialism is just as baseless in view of our devotion to pure charity. He gave some illustrations of how some of the best doctrines are confirmed by medical teaching, and then went on to show that society treated medicine with coldness and discouragement. Public thanks and public funds were given by parliament to commanders, diplomatists, and others, but the great medical discoverers, whose work affected the lives and happiness of successive generations, were ignored. Even the minor State honors were seldom bestowed by the crown, and peerages were denied even to the most eminent. Our present gracious queen has several times exhibited some sympathy with the medical profession, but her ministers have not advised her to offer that rank which has often been the price of political support.

The School of Pharmacy is nearly enough related to call for a word, and this year Sir H. W. Acland, President of the Medical Council, and Professor of Medicine in the University of Oxford, came up and delivered an introductory address to the students. His subject was

Progress of Medical Science.

HEMORRHAGIC APOPLEXY AND MILIARY ANEURISMS.—In a series of clinical and pathological memoranda published by Dr. Byrom Bramwell, we find some interesting observations on the above subject (*Edinburgh Medical Journal*, September, 1886). The author's views are in accord with the statements of Charcot and Bouchard, that the immediate cause of the ordinary form of cerebral hemorrhage is usually the rupture of minute (miliary) aneurisms, and that these aneurisms are, as a rule, the result—a late, and, as it were, a secondary result—of a lesion which is widely spread throughout the arterial system of the brain. This lesion, which they have termed diffuse periarteritis, chiefly affects the minute arteries (arterioles), but may also invade the large arterial trunks at the base, and their branches in the meninges, on the one hand, or may extend to the capillaries of the brain on the other. All three coats of the vessel may be involved, but, as a general rule, the lesion progresses from without inward, the outer coat being first and most affected. In this, and also in some other respects, periarteritis differs essentially from ordinary atheroma (sclerotic endoarteritis), which, up to the time when Charcot and Bouchard published their observations, was thought to be the lesion with which cerebral hemorrhage was associated. When an artery affected with diffuse periarteritis is examined microscopically, the most common condition is found to be an enormous multiplication of nuclei in the lymphatic sheath and adventitia, with atrophy and disappearance of the muscular elements of the middle coat, and it is important to note that this atrophy of the muscular fibres is unattended with fatty degeneration. In some cases—and these are probably old-standing cases in which the multiplication of nuclei has at one time been present, but has disappeared—the irregularly heaped-up masses of nuclei in the lymphatic sheath and adventitia are not seen, but the layers of the arterial coat are simply thickened, and present a striated, fibrous appearance, the adventitia being more or less closely dotted over with fusiform nuclei arranged longitudinally with the canal of the vessel. The inner coat is only affected in the later stages of the process; it may, indeed, be quite unaffected even when the other coats are extensively involved. Implication of the inner coat is manifested by multiplication of its nuclei, which lose their ovoid shape and regular arrangement. In the earlier stages of the process the lymphatic space between the lymphatic sheath and the adventitia may remain patent, containing, perhaps, some cellular elements—fatty particles or granules of hæmatoidin—a condition which is by no means peculiar, and which is seen in many other morbid states. When the lesion is more extensive the lymphatic space is often obliterated, and the thickened lymphatic sheath and adventitia are, as it were, fused together. In consequence of the atrophy of the muscular fibres of the middle coat, the resisting power of the wall of the vessel is diminished, and the blood-pressure tends to produce dilatations which may be of various forms—cylindrical, fusiform, moniliform, and saccular—and it is to these dilatations that Charcot and Bouchard have given the name of miliary aneurisms. The fibrous thickening of the lymphatic coat and adventitia, which is seen in some cases, seems to be attended with some compensatory advantages; for it increases the resisting power of the arterial coat, supplying the place, as it were, of the muscular elements which have disappeared. Charcot states that miliary aneurisms are scarcely ever observed where the external coat has reached a certain degree of fibrous metamorphosis. This rule is not, however, without exceptions, as some of his own specimens clearly show. Charcot and Bouchard have detected miliary aneurisms in every case of cerebral hemorrhage (cerebral hemorrhage *par excellence*) which they have examined. The number of miliary aneurisms which are present in any given case varies considerably. In some cases only two or three have been detected, even after the most careful examination, while in others more than one hundred have been counted. These miliary aneurisms, which are distinctly visible to the naked eye, having a diameter of $\frac{1}{15}$th to $\frac{1}{3}$th of an inch, occur most frequently, according to Charcot and Bouchard, in the optic thalami and corpora striata, then in the pons, the gray matter of the convolutions, the claustrum, the cerebellum (especially the parts in the neighborhood of the rhomboidal body), the cerebellar peduncles, and, lastly, the centrum ovale. Miliary aneurisms are most easily observed in the convexity of the cerebral hemispheres. After removing the pia mater from the surface of the convolutions, they are seen as little, spherical, shining grains, not unlike the glomeruli of the kidney, on the summit and sides of the gyri or at the bottom of the sulci. When the aneurisms are situated in the substance of the gray matter, or at the junction of the gray with the white matter, they are best detected by making sections through the brain-substance at right angles to the surface of the convolutions; but even when completely buried in the gray substance, they may often be dimly seen through the brain-tissue as ill defined, bluish spots on the free surface of the convolutions. Their detection in the walls of recent hemorrhagic cavities is more difficult. The cavity should be laid open by a free incision, and the blood and clot which it contains allowed to escape; the brain should then be placed in a basin of water, which should be frequently renewed, without shaking, by simply inclining the vessel from time to time. In this way the clot, which is adherent to the walls, is gradually detached, and a number of fine, flocculent, vascular filaments are seen attached to the edge of the cavity. On careful examination little globular swellings will be seen on the free extremities of some of the fine vascular filaments. The majority of these swellings are found, on microscopical examination with a low power, to be blood-clots, but some of them may be little globular aneurisms. In some cases the miliary aneurisms, which have been detected adhering to the walls of recent cavities, have been found to be ruptured, and the actual source of the bleeding has in this way been demonstrated. The miliary aneurisms are sometimes round and globular swellings springing from the lateral wall of the vessel; in other cases, fusiform or spindle-shaped, and consisting of a more or less uniform enlargement of a minute artery.

THE VITALITY OF PATHOGENIC MICRO-ORGANISMS IN WATER.—The study of micro-organisms in water is receiving a continually increasing measure of attention, since the impulse which was given to this and all other branches of bacteriology by Koch's now well-known method of gelatin-plate cultivation. For several years past a large number of observations have been made upon the relative abundance of micro-organisms in natural waters of different origin, and upon their removal by various agencies, both natural and artificial. These researches have resulted in the accumulation of a large amount of information concerning the value of filtration and other processes of water-purification; thus the monthly examinations of the London water-supply, made by Dr. Percy Frankland, and published in Sir Francis Bolton's reports to the Local Government Board, show that the river-waters, in the process of storage and filtration, have the micro-organisms which they contain reduced on an average by ninety-five per cent. before reaching the consumer, and a similar reduction has been observed in the case of the Berlin water-supply, which is periodically examined under the superintendence of Dr. Koch. The biological examination of water has hitherto only in very exceptional cases resulted in the identification of pathogenic forms; nor is there much prospect of such forms being discovered, owing to the enormous preponderance of non-pathogenic organisms which must almost invariably exist. This fact does not, however, in any

way diminish the hygienic value of the results referred to above, as, especially in the case of mechanical processes of purification, there can be no doubt that pathogenic micro-organisms are subject to precisely the same influences as the non-pathogenic. The inquiry into the bacteriology of water has not, however, been allowed to rest here; and, since pathogenic organisms are not, under ordinary circumstances, to be found in water, they have, for purposes of experiment, to be introduced into this medium in such quantity that they can be readily detected by plate cultivation; and then their subsequent fate, under varying conditions of temperature, etc., can be observed by the same method of examination. Dr. Percy Frankland calls attention to the results which have been already obtained in connection with this subject, and which shows that, new as is this field of research, a large number of important facts have already been collected by various investigators. The results which have been obtained show that different organisms are endowed with very different capacities for enduring the conditions afforded by waters of various kinds; nor is it surprising to learn that the greatest contrast is presented by the different forms of one and the same organism, as, for example, the bacilli of anthrax and its spores. Just as in their resistance to antiseptics, to temperature, and to desiccation, so in their endurance in water the spores exhibit a vitality far greater than that which is possessed by the bacilli. Thus we learn that Dr. Meade Bolton has shown that the spores of anthrax remained alive in distilled water for upward of ninety days, and in polluted well-water for nearly a year, while when bacilli alone were introduced into some kinds of potable water they perished in the course of a few days. Koch's "comma-bacillus," again, may survive for some days in potable water of the best quality, and in sewage it would appear to find an excellent culture-medium. This organism, moreover, seems capable of adapting itself to the aqueous medium, for when introduced into water a large proportion of the bacilli are generally destroyed, but the remaining ones then undergo multiplication, and Dr. Wolffhügel has found that when these adapted organisms are further transplanted into fresh water, they do not undergo this preliminary reduction in their number, but commence multiplication at once. These results clearly show how some zymotic diseases may be communicated by potable water of even the best quality, more especially if the micro-organisms, which are the causes of the disease, are capable of forming spores, but even in the absence of such spores. This power of adaptation to a particular medium greatly extends the possibilities of vital activity for organisms which are not known to produce spores.—*The British Medical Journal.*

Stenosis of the Descending Aorta.—Dr. Barié (*Revue de Médecine*) has collected all the cases of contraction of the descending aorta of which records were accessible to him. Added to his own observations, these make a total of ninety-two cases, in eighty-seven of which the facts were verified after death by post-mortem examination. He points out that the localization of the disease is invariably in a position intermediate between the ascending and descending aorta, which corresponds to the aortic isthmus of fetal life, and that the constriction is usually single, but at times double, while it may be gradual or abrupt. When very much developed, the contracted portion resembles a funnel with the narrow end downward. The constriction is formed by a simple fibrous thickening of the walls, by thickened folds of the internal tissue, with swellings projecting into the lumen of the vessel; under other circumstances by a transverse septum perforated by a central or marginal opening, or the narrowing may be by two segments of the artery terminating each in an infundibulum, and joined by a fibrous cord, like two cæca in juxtaposition united by a single patent vermiform appendix. The dimensions of the constriction vary greatly. The proximal part of the aorta is generally much dilated, and has several times led to aneurism and rupture; on the distal side of the constriction it is also sometimes dilated, but this is not constant. Usually the large vessels springing from the transverse aorta participate in the dilatation of the proximal part. The ductus arteriosus is almost always obliterated. In eight cases it was patent as in fetal life, and in one case it was aneurismal. Certain lesions of the heart and great vessels result as a consequence of the stenosis, such as dilatation and hypertrophy of the heart, congestion of the head and upper limbs, with diminution of the blood-supply to the body and lower limbs, which latter is obviated by the increase of the anastomoses between the upper and lower parts of the body. In about thirty-eight per cent. of the cases observed, congenital or developmental anomalies were recorded, and the majority of the cases were of the male sex. There is nothing pathognomonic in the physical signs—evidence of dilatation and hypertrophy of the left side of the heart, with murmurs propagated along the aorta, and distention of the superficial vessels of the thorax being most common. The pulsation of the arteries is increased in the neck and upper extremities, and diminished or absent in the lower limbs, where it is always retarded. The course of the disease depends on the state of the cardiac muscle; the progressive is not grave, and the average age at death in the cases observed is thirty-four. The diagnosis is difficult, and depends on the presence of the dilated vessels aforesaid, and on the difference between the upper and lower circulation; it must be distinguished from mediastinal tumors, aneurisms, and all causes of intrathoracic pressure. All the theories of the origin of the disease involve, on final analysis, an arrest of development of the aortic isthmus, and this appears to be an effect of premature obliteration of the ductus arteriosus, which causes traction and consequent contraction of the aorta.

Case of Sudden Death from a Blow on the Testicles.—Dr. Ivanoff has placed on record the following case: A man, aged between forty-five and fifty, fought with a woman on the street. During the fight the woman dealt a violent blow on his genital organs. The man shouted, "I am dying," staggered, and fell insensible. The author, who was almost immediately fetched to the spot by a policeman, found the patient lying on his back, motionless, pulseless, and breathless, his face, neck, and scrotum being very red. Not a trace of ecchymosis or any other sign of injury was detected anywhere in the man. Since there seemed to be heard a slight cardiac murmur, and a slight tremor to be felt in the carotids, Dr. Ivanoff, without any delay, resorted to artificial respiration. But neither forty-five minutes' manipulations, nor electrolization, could establish the man's breathing. The congested parts soon became livid, and every sign of life extinct. At the post-mortem examination there were found only intense congestion of the meninges and brain, congestion of the lungs, with numerous punctiform ecchymoses, accumulation of dark-red fluid blood in the cardiac cavities, congestion of the stomach, liver, kidneys, and testicles. Everything else was quite normal. Basing his conclusions on all the facts as sketched above, the author stated (forensically) that death followed from syncope, which had been brought about by sudden, violent pain, caused by a blow on the testicles.—*London Medical Record.*

A Large Infant.—Dr. R. C. MacDonald, of Boston, writes that on October 5, 1884, he delivered a woman of a female child weighing eleven pounds. On March 13, 1885, several measurements were taken, giving the following dimensions: Circumference of head, 17 inches; of chest, 19; left arm, 9½; forearm, 6½; thigh, 11½; leg, 8; and waist, 20½. The length of the child was 26 inches. The weight could not be ascertained. The child was perfectly healthy, and though but five months old, could walk pushing a chair before it, and could say "papa" and "mamma."

forward end giving freedom of movement without the necessity for throwing the entire weight of the body upon the opposite limb before the knee can be advanced.

When Chinese shoes can be had I have used them for such cases in preference to home-made substitutes; but an ordinary slipper or shoe, with a piece of wood screwed to the bottom, will answer quite as well, although not so comely. Fig. 5 shows the shape of such a block. As before intimated, I have used this contrivance in sprains, bruises, gout, and other troubles which

FIG. 5.—Slipper with Block of Wood Attached.

disable the feet, and have had most favorable opinions, from those who have worn it, respecting the comfort derived, and the ability to walk without aggravating the joint trouble.

October 9, 1886.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 17 to October 23, 1886.

WEBSTER, WARREN, Major and Surgeon. Leave of absence on account of sickness further extended one year on account of sickness. S. O. 244, A. G. O., October 20, 1886.

WEISEL, DANIEL, Captain and Assistant Surgeon. Relieved from duty at Fort Fred. Steele, Wyo., and ordered to proceed to, and take station at, Fort McKinney, Wyo., reporting to the commanding officer of that post for duty. S. O. 135, Department of the Platte, October 15, 1886.

TAYLOR, B. D., Captain and Assistant Surgeon. From Department of the East to Columbus Barracks, O. S. O. 244, A. G. O., October 20, 1886.

TESSON, L. S., Captain and Assistant Surgeon. From Department of Texas to Department of the East. S. O. 244, A. G. O., October 20, 1886.

BARROWS, C. C., First Lieutenant and Assistant Surgeon. From Department of Arizona to Department of the East. S. O. 244, A. G. O., October 20, 1886.

EGAN, P. R., First Lieutenant and Assistant Surgeon. From Department of Arizona to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

WALKER, F. V., First Lieutenant and Assistant Surgeon. From Department of the East to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

CARTER, E. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for six months, with permission to apply for an extension, and to go beyond sea, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Having returned from detached service in Department of Arizona, will join his station at Fort McIntosh, Tex. S. O. 144, Department of Texas, October 13, 1886.

BLACK, CHARLES S., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months on surgeon's certificate of disability, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

CHAPIN, ALONZO R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Laramie, Wyo., and ordered to Fort Washakie, Wyo. S. O. 137, Department of the Platte, October 19, 1886.

IVES, FRANCIS J., First Lieutenant and Assistant Surgeon. In obedience to instructions received from the Division Commander, ordered to report in person at Headquarters Department of the Platte for duty. S. O. 146, Department of Texas, October 16, 1886.

KENDALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Leave of absence extended fifteen days. S. O. 239, A. G. O., October 14, 1886.

BANISTER, W. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Wingate, N. M. F. O. 97, Department of Arizona, September 29, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Verde, Ariz. Terr., and ordered for duty at Fort Huachuca, Ariz. Terr. S. O. 99, Department of Arizona, October 12, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 23, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	33	6
Scarlet fever	32	2
Cerebro-spinal meningitis	2	1
Measles	108	7
Diphtheria	94	41
Small-pox	0	0
Yellow fever	0	0

THE NATIONAL SYSTEM OF PHYSICAL TRAINING IN GERMANY.—Dr. Mary T. Bissell, of this city, writes: "The recent exhaustive report on Physical Training, made by Dr. Hartwell to the Bureau of Education at Washington, is very suggestive to all who are interested in this branch of hygiene. The work which is being accomplished in our American colleges for both sexes is carefully reviewed; but perhaps the most instructive portion of the report is concerned with the national system of physical training so long in use in Germany. It shows us that Germany, so easily at the front in scientific research, has had the sagacity to apply science to the physical education of her children, as evinced in the elaborate system in use in her public schools and turnhallen. Originating, as the systematic cultivation of the body has in every country, from a desire to maintain the army in a vigorous condition, the German government quickly apprehended the fact that a system which could produce strong bodies in one class of citizens might yield equal results in the training of her people at large. Accordingly, we find in Germany the most elaborate system of physical training known at present in any country. This system is general, *i.e.*, applies to both sexes, with careful adaptation to age and sex. It is compulsory in schools, unless the student is excused by physician's certificate. It is on a scientific basis, the teachers (or turners) being graduates of a normal school, where they receive instruction from a medical faculty in anatomy, physiology, and hygiene, as well as practical training in exercises proper. Dr. Hartwell says of the Prussian system: 'As a rule, each school has its turnhalle (indoor gymnasium), and, in very many cases, its own turnplatz (outdoor gymnasium), furnished with appropriate machines. Frankfort provides special play-grounds and swimming-baths for the use of school children.' Frankfort spends yearly about twenty-seven thousand dollars for the gymnastic training of these children. Berlin, alone, has ninety-eight turnhallen erected for the people's use at the city's cost. In the largest of these, more

than thirteen thousand persons exercise weekly. In the public schools each class has its special time for gymnastics, just as it has special hours set for arithmetic and reading, and the gymnastic course is graded, beginning with simple and light movements, gradually advancing to more elaborate series. It is said that nearly a fifth of the population of Prussia is, through its various facilities in public and private, receiving systematic physical training. It is impossible to avoid comparison between this elaborate system of body-training, carried on under government patronage abroad, and the entire absence of any such national work in America; or to resist the conviction that the establishment of some similar system in our own country would result, in time, in the production of a hardier class of children and adults than the flat-chested, unevenly developed American of the present day. Since heredity is an acknowledged factor in the development of the race, any work which tends to improve the bony skeleton, to increase the vital capacity, and to promote the bodily vigor of the individual may properly be classed under the head of 'preventive medicine.'"

Subcutaneous Injection of Salt Solution.—Dr. Albert H. Tuttle writes from Vienna to the *Boston Medical and Surgical Journal*: "I lately witnessed the subcutaneous injection of 50 c.c. of a salt solution into the body of a boy seven years old, by Professor Monti, and believing it may be of interest to your readers, and perhaps at some time useful, I send you this brief description of his method. The requisites are: A piece of rubber tubing about six feet long, a large hypodermic needle, and a graduated beaker containing a solution of salt. The salt solution is heated to 100° F., and then placed about four feet above the patient, on a stool that rests on the top of a table. The hypodermic needle is attached to one end of the rubber tubing. The tubing is filled with water and one end is inserted into the salt solution, then the needle end of the tube is lowered and the contents are allowed to run off until the stream becomes warm from the salt solution in the beaker. The needle is now inserted into the subcutaneous tissue while the stream is flowing. At this moment an assistant reads the level of the fluid in the beaker. This done, one can tell exactly, by means of the scale on the beaker, how much of the solution has been injected. The tissue is distended by the fluid, forming a tumor which disappears in the course of an hour or two. In the case I saw, the injection was made an inch and a half below the navel, and a half inch to the right of the median line. The swelling was an inch and a half in diameter, and about half an inch in height. The whole time occupied in giving the injection and making the necessary preparations, did not exceed twenty minutes. The method has been employed in the collapse of cholera infantum, and may further be found useful in some of those cases where intravenous injection has formerly been resorted to."

Posology and Use of Some New Remedies.—*Osmic acid:* Best administered in pill form (made up with Armenian bole). The dose is $\frac{1}{60}$ grain, which may be repeated several times a day. Used in epilepsy and sciatica. *Agaricine:* Best administered in combination with Dover's powder. Dose $\frac{1}{15}$ to $\frac{1}{6}$ grain. Used for night-sweats. *Aloin:* From $\frac{1}{3}$ of a grain to $3\frac{1}{2}$ grains, in pill form. *Antipyrine:* Dose from 75 to 90 grains, divided into three portions, one of which is to be taken every hour. *Bismuth salicylate:* Dose from 5 to 7 grains, in pill form. In typhoid this dose may be doubled and repeated every hour, up to 10 or 12 times. *Canabinone:* From $\frac{3}{4}$ to $1\frac{1}{2}$ grain. Best administered mixed with finely ground roasted coffee. Sedative and hypnotic. *Colocynthin:* Used subcutaneously. The dose is from $\frac{1}{6}$ to $\frac{1}{2}$ grain. It may also be administered in pill form, by the mouth, the requisite dose being from $\frac{1}{3}$ to 1 grain. *Convallaramine:* Internally, in pill form. The dose is from $\frac{3}{4}$ to $1\frac{1}{4}$ grain. *Euonymin:* Best given in pill form, combined with extract of belladonna or hyoscyamus. The dose is from 3 to 10 grains. *Nitroglycerin* is best given in alcoholic solution. The dose is from $\frac{1}{100}$ to $\frac{1}{60}$ grain, repeated several times a day. Rossbach prefers ether as a solvent. His formula for its use is as follows: Dissolve $1\frac{1}{2}$ grain of nitroglycerin in sufficient ether, and add the solution to a mixture consisting of two ounces of powdered chocolate and one ounce of powdered gum-arabic. Mix very thoroughly and divide into 200 pastilles. Each pastille will thus contain $\frac{1}{333}$ grain of nitroglycerin. Used in angina pectoris, and as a diuretic. *Picrotoxine;* In aqueous solution. Dose from $\frac{1}{8}$ to $\frac{1}{4}$ grain. Used in epilepsy. *Sulphate of thalline* may be given dissolved in wine or water (with some corrigerant). The dose is from 4 to 8 grains, or 1 grain every hour. The above is taken in part from the *Rundschau Leitmeritz.*

A Laxative and Tonic Wine.—℞. Tincture of calisaya, tincture of simaruba, tincture of gentian, tincture of bitter-orange peel, of each f 3 ijss.; tincture of ignatia bean, 3 ss.; sherry wine enough to make Oij. Mix and filter. The wine is tonic, carminative, and laxative. The dose is from one to two fluid ounces.—*Prog. Médical.*

Spongio-piline for Varicose Ulcers.—Dr. F. B. Carpenter has found spongio-piline an admirable dressing in inflamed varicose ulcers of the leg, because with it one can combine compression and a poultice at the same time; also for specific ulcers, moistened by bichloride of mercury solutions, etc.; also an excellent application in brawny indurated buboes, where poultices are indicated and where the patient is compelled to be on his feet. In healing obstinate sinuses (the remains of old buboes), when ordinary applications, such as nitrate of silver, etc., have failed, he had good results from applications of saturated solutions of iodoform and ether.—*Bulletin of New York Post-Graduate Med. School.*

Helenin in Chorea.—On account of its alleged antispasmodic properties, Dr. C. L. Dana has used helenin in three cases of chorea. The patients all reported themselves improved under its use, but the drug was too expensive to be extensively tried. It was given in alcoholic solution, one-third grain, three to four times daily. It now costs about fifty cents a gramme. It has been successfully employed by French physicians in bronchitis and spasmodic cough.—*Bulletin of New York Post-Graduate Med. School.*

The Dietetics of Pulmonary Phthisis.—Dr. A. L. Loomis formulates the following rules to govern the dietetics of phthisical subjects (*Journal of Reconstructives*, October, 1886): 1. Every phthisical patient should take food not less than six times in the twenty-four hours. The three full meals may be at intervals of six hours, with light lunches between. 2. No more food should be taken at any one time than can be digested easily and fully in the time allowed. 3. Food should never be taken when the patient is suffering from bodily fatigue, mental worry, or nervous excitement. For this reason mid-day naps should be taken before, not after, eating. Twenty to thirty minutes' rest in the recumbent posture, even if sleep is not obtained, will often prove of more value as an adjuvant to digestion than pharmaceutical preparations. 4. So far as possible each meal should consist of such articles as require about the same time for digestion, or, better still, of a single article. 5. Within reasonable limits the articles of any one meal should be such as are digested in either the stomach or intestine alone, *i.e.*, the fats, starches, and sugars should not be mixed with the albuminoids, and the meals should alternate in this respect. 6. In the earlier stages the amount of fluid taken with the meals should be small, and later the use of some solid food is to be continued as long as possible. 7. When the pressure of food in the stomach

excites cough, or when paroxysms of coughing have induced vomiting, the ingestion of food must be delayed until the cough ceases, or an appropriate sedative may be employed. In those extreme cases where every attempt at eating excites nausea, vomiting, and spasmodic cough, excellent results are attained by artificial feeding through the soft-rubber stomach-tube. 8. So long as the strength will permit assimilation and excretion must be stimulated by systematic exercise, and when this is no longer possible the nutritive processes may be materially assisted by passive exercise at regular intervals. The following may serve as a sample menu for a day in the earlier stage. The meat soup is made by digesting finely chopped beef (1 ℔.) in water (O j.) and hydrochloric acid (℥ 5) and straining through cheese-cloth. Menu: On waking, One-half pint equal parts hot milk and Vichy, taken at intervals through half an hour. 8 A.M., Oatmeal with abundance of cream, little sugar; rare steak or loin chops with fat, cream potatoes; soft-boiled eggs, cream toast; small cup of coffee, two glasses of milk. 9 A.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 10 A.M., Half-pint raw meat soup; thin slice stale bread. 11–12, Sleep. 12.30 P.M., Some white fish; very little rice; broiled or stewed chicken; cauliflower; stale bread and plenty of butter; baked apples and cream; milk, kumyss, or Matzoon, two glasses. 2 P.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 4 P.M., Bottle kumyss or Matzoon; raw scraped beef-sandwich. 5.30–6 P.M., Rest or sleep. 6 P.M., Some thick meat or fish soup; rare roast beef or mutton; spinach; slice stale bread; custard pudding; ice-cream. 8 P.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 9–10 P.M., Pint iced milk; cup meat soup. 1–2 A.M., Glass milk, if awake.

German Hospitals in St. Petersburg.—There are two German hospitals in St. Petersburg, the oldest of which is the Evangelical Hospital, founded in 1859 by Karl von Mayer. It is of a distinctly religious character, and receives only women as patients. The Alexander Hospital for men was established as a memorial of Czar Alexander II., and was opened for the reception of patients in 1884. Dr. E. Moritz was the founder, and is the present director. The hospital is exclusively for men who are not of Russian birth, and is under the care of no particular religious denomination. It commenced with twenty-five beds, but its capacity will soon be increased to sixty beds, which is the number at present in the Evangelical Hospital.

Intussusception in Children.—According to Dr. W. E. Forrest, three courses of treatment may be pursued in cases of intussusception in children. First, an operation by laparotomy, opening the abdomen and attempting to reduce the invagination by traction on the intestine; Second, leaving the case to nature, with the chance of a cure by spontaneous elimination of the invaginated portion of the intestine; or, third, the use of a more forcible injection, even though there be the possibility of rupturing the intestine by so doing. The author would recommend the following course in all cases of intussusception in children: A pressure of six pounds to the square inch having failed to reduce the tumor after a lengthened trial, I should cautiously raise the pressure to seven and eight pounds, and even nine pounds, to the square inch, depending on the acuteness of the attack and the length of time the invagination had continued. This having failed, what course should then be followed? If the child be under two years of age, open the abdomen at once, and resect the intestine. The child will probably die; but, if left to nature, the case is absolutely hopeless. If the child be between two and three years of age, and injections have failed, chances of cure by sloughing or from laparotomy are about equal, and the surgeon will be justified in following either course. Remember that the invagination probably cannot be reduced even by traction, and the principal object in opening the abdomen is to resect the intestine, or to perform enterotomy. If, however, the child be over five years of age, and the tumor has resisted a pressure of eight or nine or ten pounds to the square inch without being reduced, we must conclude that it is irreducible. Now, according to statistics, the operation of laparotomy in these cases shows a greater death-rate than the cure by sloughing, the "spontaneous cure;" therefore, nature's operation, nearly hopeless as it is, should be preferred to laparotomy.—*American Journal of Obstetrics.*

Tulipine.—This alkaloid was extracted by Serrard from the ordinary garden tulip. It appears to exist in all parts of the plant, in the flowers as well as in the stems. Its therapeutical action has not yet been very carefully studied, but from experiments thus far made it would seem to act especially upon the spinal cord and sensory nerves. Frogs poisoned with tulipine present toxic symptoms similar to those caused by veratrine, and they die with the heart in systole. Ringer regards the alkaloid as a very active sialagogue. It has no effect upon the pupil, even when given in toxic doses.

The Disinfection of Books.—The health authorities of Aberdeen have ordered that all books taken from the public library, which are known to have been in the hands of those suffering from any contagious disease, must be sent to a disinfecting establishment before being returned to the shelves. The librarian is provided with a list of the families in the town where there are any cases of contagious disease.

The Sale of Hopein in Austria has been forbidden by the Minister of the Interior and of Commerce. No preparations alleged to contain hopein are permitted to be sold, and apothecaries have been forbidden to dispense them, even on a physician's prescription. It is stated, as the reason for this prohibition, that the hopein said to be prepared from American hops is not made from hops at all, but is for the most part morphine.

For the Detection of Blood-spots.—A suspected spot is to be washed with the tincture of guiac and then with ozonized essence of turpentine, and if the spot is blood it will immediately assume a brilliant violet color. The value of this sign is, however, negative rather than positive, for many other substances will give the same reaction; but, according to Professor Sestini, if the violet color is not produced it may be asserted positively that the spot is not one of blood.

The Fathers of Great Men.—The father of Demosthenes was a blacksmith, of Euripides a dealer in vegetables, of Socrates a mediocre sculptor, of Epicurus a shepherd, of Virgil an inn-keeper. Columbus was the son of a wool-carder, Shakespeare of a butcher, Luther of a miner, Cromwell of a brewer, Sixtus V. of a swineherd, Linnæus of a poor country minister, Franklin of a soap-boiler, Rousseau of a watchmaker, and Murat of an inn-keeper. The mothers of these men may have been the source from which their genius was derived, and indeed it is known that some of them were women of more than ordinary excellence.

The Medico-legal Aspect of Hypnotism.—M. Liégeois, Professor of Law of the Faculty of Nancy, calls attention to the possibility of crimes being committed by hypnotized individuals at the suggestion of those who have put them in this condition, and argues very justly that in such a case the punishment should fall on the author of the criminal suggestion rather than upon the irresponsible agent.

A Good Measure.—The police authorities in Zürich have made an excellent rule to the effect that no one shall be permitted to play upon the piano after ten o'clock in the evening, unless the windows of the room are tightly closed. The Swiss seem to have some regard for their sick or sleepy fellow-citizens.

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Original Articles.

THE RELATIVE INFLUENCES OF MATERNAL AND WET-NURSING ON MOTHER AND CHILD.[1]

BY JOSEPH EDCIL WINTERS, M.D.,

NEW YORK.

NATURE has so manifestly declared what should be the food of infants that one might suppose that there would be no occasion for writing on the subject.

The theories of man, however, have so far superseded the natural mode of feeding that it has become a question of great practical importance to every practising physician how to feed a baby.

The reports of the Bureau of Vital Statistics for New York alone prove that the present modes of infant feeding are grievously, calamitously wrong. Of 35,682 deaths in New York City during the year 1885, 9,303, or nearly one-fourth, occurred in the first twelve months of life! During the same year there were, exclusive of still-births, 30,030 children born. The deaths in infants less than one year old were equal, therefore, to nearly one-third of the number of births.

If we inquire into this mortality, we find it chiefly traceable to faulty feeding. If such mortality arose from epidemic influences, there would be immediate and importunate demands for health boards or some organized exertion to check it. But an unnatural and unjustifiable system of infant feeding, which yearly sacrifices thousands of infants, excites but little comment—moreover, it is encouraged by a large number of the medical profession.

In the following pages I propose to show that every attempt to depart from maternal suckling, *even when a hired breast is resorted to*, increases infant mortality.

Very few children nursed exclusively at the mother's breast die during the first year—even in institutions and among the poor in tenements in New York. Very few children artificially fed, in institutions or among the poor, survive the first year. Children put out to dry-nurse by mothers who take the situation of wet-nurses almost invariably die.

In the upper classes, where there is intelligence and good care, with the feeding properly directed, a bottle-fed baby rarely dies during its infancy. It follows, therefore, that the poor, but especially the ignorant poor, should be urged to raise their children at the breast.

In institutions, breast- not bottle-feeding must be had, if attainable. Where intelligent, scrupulous care can be had, bottle-feeding may be undertaken with every prospect of success.

We have for consideration: I. Maternal Nursing; II. Wet-Nursing.

I. MATERNAL NURSING. 1. *Importance to child.*—According to the last printed report (1882) of the Infants' Hospital on Randall's Island, the death-rate among infants nourished at the breast was less than sixteen per cent., while among those that were bottle-fed it was more than seventy-five per cent.[2]

At the Country Home of the New York Infant Asylum (Flushing), during the year 1878, of 37 infants wholly nourished by mothers, none died; while of 40 wholly hand-fed, 8 died.[3]

"Out of 37 infants under one year of age suffering with entero-colitis, but 6 nursed exclusively at the breast; only 1 of the 6 was seriously sick—20 of the 37 sick children had artificial food; of the 20 thus fed, 16 were seriously sick."[4]

In Boston, out of 200 infants with diarrhœa, only 33 were breast-fed, and in 10 of these it was a complication of an acute disease. Among these 33, only 6 were seriously ill, and *none* died.

Out of 69 artificially fed infants with diarrhœa, *where the result was known*, 22 were seriously ill, and 6 died.[5]

"In the institutions nearly every bottle-fed infant under the age of four, or even six, months dies in the hot months, while the wet-nursed of the same ages remain well."[6]

"The mortality of those suckled compared with those hand-fed was as 19.2 to 53.9."[7]

"Of those that were nursed, 13.5 per cent. died; of those that were *not* nursed, 42.7 per cent died."[8]

Dr. Denis-Dumont gives mortality of children at breast, 10 in 100; mortality of children at bottle, 30 in 100.[9] He adds: "The mortality among those artificially fed *does not apply to those in favorable surroundings.*"

In Munich 7.6 per cent. of those nursed died, while 24.7 per cent. of those hand-fed died. In Bavaria, where a nursing mother is an exception, 50 per cent. die; while around Kronach, where nearly *all* children are nursed, only 25 per cent. die.[9]

In 1868, nursed by mother, 10.6 per cent. died, while not nursed, 89.4 died; 1869, nursed by mother, 16.1 per cent. died, while not nursed, 83.9 died; 1870, nursed by mother, 17.6 per cent. died, while not nursed, 82.4 died. Average nursed by mother, 14.8 per cent. died; average not nursed, 85.2 died. This out of a total number of 8,329 cases.[9]

At Rheims all are hand-fed, mortality, 60.9 per cent.; at Lyons all are suckled, mortality, 33.7 per cent.[10]

Besides the high death-rate which artificial feeding produces, as it is ordinarily carried out among the poor and in institutions, there is another, and not less serious result to be looked to. I refer to its influence on the development, future health, and usefulness of the children so fed.

The report of the Hospital for Children at Manchester, England, shows the injurious influence upon the infant constitution from want of breast-milk. Children who had breast-milk alone to the ninth month, or longer, and some to the age of two years, 62.6 per cent. were well developed, and 14 per cent. were badly developed. Of children fed exclusively by hand there were 10 per cent. well developed, and 64 per cent. badly developed.

Bouchut found that rickets is remarkedly more common in children not nursed. This accords with the experience of every physician who sees much of dispensary

[1] Read before the Section of Obstetrics and Diseases of Women and Children, New York Academy of Medicine, October 28, 1886.

[2] These results apply only to artificial feeding, as it is ordinarily done in tenement-houses, in children "put out" to dry-nurse, and in institutions.

[1] Seventh Annual Report New York Infant Asylum, January, 1879.

[2] Fifth Annual Report of the Thomas Wilson Sanitarium for Children, pp. 12, 13. Baltimore, 1885.

[3] Archives of Pedriatrics, July, 1886, p. 407.

[4] Smith, J. Lewis: A Treatise on the Diseases of Infancy and Childhood, p. 724. Philadelphia, 1886.

[5] Glasgow Med. Jour., May, 1885, p. 333.

[6] Schmidt's Jahrbücher, Ges. Med., Band 189, p. 51, 1881.

[7] Denis-Dumont: Archives Gen. de Méd., vol. ii., p. 105, 1867.

[8] Pfeiffer: Gerhardt's Handbuch, p. 326.

[9] Journal für Kinderkrankheiten, vol. lvii., p. 196, 1871.

[10] William Burke Ryan: Infanticide, p. 111. 1862.

children in cities. We also find it to be common in children who are nursed too long.

In Swabia 44 per cent. of the Christian children, who are frequently artificially fed, die in the first year of life, while only 8 per cent. of the Jewish children die, who are invariably nursed by their mothers.[1]

2. *Importance to mother.—Its influence in preventing disease of the pelvic viscera.* While everyone appreciates the advantages of maternal nursing to the child, many physicians fail to understand the importance, the *necessity* almost, to the mother of suckling after parturition, so as to insure a speedy and complete recovery. It will be shown that a healthy mother who does not nurse her child prejudices her prospects of a good recovery from her confinement, and is liable to entail upon herself permanent ill-health. A nervous nexus establishes a close sympathy between the breasts and the womb, and the stimulation of suckling, by reflex action, induces uterine contraction. This contraction is promotive of uterine involution. When this reflex stimulus to the uterus is neglected, the retrogade metamorphosis is delayed, and sometimes the organ remains permanently large, with its manifold consequences. Suckling, then, by promoting uterine resolution, becomes preventive, to some extent at least, of uterine congestion, subinvolution, displacement, chronic metritis or areolar hyperplasia, menorrhagia, metrorrhagia, and leucorrhœa, which often follow childbirth.[2]

Arrest of involution, delayed involution, and subinvolution are the prime factors in the majority of the diseases of the uterus and its appendages which are now so prevalent.[3]

In women who do not suckle, the lochia are more abundant and last longer than in those who do.[4] Secondary inflammatory processes by extension are also more common in them.

Every form of uterine and pelvic disease is more frequent among women who *do not* than among those who *do* nurse their children. Utero-gestation and delivery are to the mother but half of the process of generation; to complete this process lactation is supplementary, and it is essential in its beneficial influence on her health. That suckling contributes to preserve and promote the mother's health is shown by the fact that many women are more robust and stronger while nursing than during any other period of their lives. Go where you will, the healthiest and the youngest in appearance (where they have been free from worry and anxiety) are women who have borne children and have nursed them. One of the most eminent obstetricians of New York, whose experience has for the last twenty years been exclusively among the upper classes, told me that patients of his who had borne six or eight children, and had nursed them, were all women who looked ten or fifteen years younger than they actually are. The wife of one of the best-known politicians in this country has had twelve children, all of whom she nursed successfully. The lady to whom I refer is as strong and active to-day as a woman of forty.

Women who have backache, headache, local disease rendering their existence miserable, and those who fill the reception rooms of the gynæcologists, are in a large number women who have interfered in some way with the natural process of generation. I have made this the subject of careful study and investigation for years, and further experience confirms my earlier observations. Recently I have had extensive recourse to the experience and the writings of others to corroborate and confirm my own inquiries.

Scanzoni says: "For many years I have noticed, and I can affirm, that nothing more restores the uterus to its normal size than maternal nursing . . . I do not go too far in attributing the frequency of chronic metritis among the wealthy class to the bad custom of not nursing their children."[1]

Of 54 women with uterine flexions, having had 196 children at term, only 57 of these children were nursed by their mothers.[2]

Verriet-Litardière (*loc. cit.*) gives the histories of fifteen women who had twenty-nine children. In every one of the twenty-one times in which the mothers did *not* suckle they had, subsequent to first or second menstruation, some uterine or ovarian complaint—leucorrhœa, dysmenorrhœa, pelvic cellulitis or peritonitis, ovaritis, uterine displacement, etc. In nearly every case there was subinvolution. After these twenty-one confinements the menses appeared in four to eleven weeks, generally the seventh week. In the eight times that the children *were* nursed, recovery and health subsequent to confinement was excellent, with no uterine complaint.

The following are instructive cases:

Case 2.—Suckled first child and made an excellent recovery; second child ditto; third child died the second day. With first period the woman had pain; leucorrhœa and dysmenorrhœa followed. On admissoin to hospital uterus was large, and there was pelvic cellulitis.

Case 5.—First child not nursed; menses appeared at end of six weeks, accompanied with pain, from which she continued to suffer at subsequent periods. Second and third children suckled for nine and eight months; health afterward good. Three subsequent children *not* suckled, and the menses returned at end of sixth week. The writer says: "During these last eight years she has suffered severe abdominal and inguinal pain, with other symptoms of uterine trouble. Examination showed an enlarged anteverted uterus."

Case 8.—First two children not suckled; she had much trouble after second confinement from an enlarged displaced uterus. She nursed the third child, with return of health; gain in flesh; no leucorrhœa and no abdominal pain as before; had not menstruated at end of fourth month, and was in excellent health.

Case 14.—Suckled first child two and one-half months; not the slightest after-trouble. Second child not nursed; menses appeared sixth week, with pain, etc. Third child died on the sixteenth day; menses fifth week; following she had dysmenorrhœa, pelvic peritonitis, uterine displacement.

Case 15.—First two children nursed, and mother continued in good health. Third child not nursed; menstruated fifth week; dysmenorrhœa and leucorrhœa subsequently. Uterus on examination found to be much enlarged, with mucous discharge.

The experience of Dr. René Blache corresponds closely with that of Dr. A. Verriet-Litardière. He states[3] that in 12 observations in which the mothers had *not* nursed their children, and became sick, all regained their health on nursing their later children. Of 20 other mothers who nursed their children, *all* remained free from puerperal diseases. We could follow these 12 cases with the 20 others, all taken among the upper classes. *Not one* of these 32 women had any puerperal accident. *Not one* of them had any serious uterine affection—neither displacement, congestion, hypertrophy, fibroma, peritonitis, ovaritis, nor cyst of the ovary.

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[1] Journal für Kinderkrankheiten, vol. lvii., p. 197, 1871.

[2] "I have observed that in women who nurse their children the process of involution is generally more rapid and complete. The flow of blood is less toward the uterus and its appendages. Are not the chances of inflammatory action and of morbid products diminished?" (R. Blache: L'Union Médicale, p. 950, 1880). "Women . . . who do not nurse their children . . . are extremely liable to congestion of the uterus, . . . and it sometimes is the commencement of a disease the most loathsome, and unhappily the most rebellious, entailed upon woman—cancer" (Bedford, Gunning S.: Clinical Lectures on Diseases of Women and Children, pp. 473–74, New York, 1876). "Women who have never nursed their children are more exposed than those who have to chronic affections of the uterus and its appendages" (Brocard, p. 63).

[3] "In the very large majority of cases of uterine disease the first link in the morbid chain is subinvolution" (Thomas, T. Gaillard: A Practical Treatise on the Diseases of Women, 4th ed., p. 219, Philadelphia, 1878). "The most prolific source of areolar hyperplasia, the so-called chronic metritis, is interference with involution of the parturient uterus" (Ibid., 5th ed., p. 312, 1880).

[4] "The lochia are less abundant in women who suckle than among those who do not" (Torrent, A. J. C.: Les Avantages de l'Allaitement Maternel, p 8, Paris, 1819). "Lactation lessens the duration and amount of the lochia" (Cazeaux and Ternier: Obstetrics, 7th Am. ed., p. 433, Philadelphia, 1884).

[1] Scanzoni, from Verriet-Litardière: Les Avantages de l'Allaitement Maternel, pp. 30–31. Paris, 1873.

[2] Verriet-Litardière and Scanzoni, F. W.: A Practical Treatise on Diseases of the Sexual Organs of Women, 4th Am. ed., p. 109.

[3] Schmidt's Jahrbucher, etc., 1881, Band 192, p. 165, and De l'Allaitement Maternel Lue à l'Académie de Méd., November 30, 1880, pp. 7–8.

Aran states[1]: "In 70 of 100 uterine cases which have come under my observation, the women have not suckled."

Gubian, Sr., showed[2] from numerous observations that unmarried mothers suffered from uterine affections from not having nursed their children, and, on the contrary, mothers of families, who, having nursed their children, had no lesion of the uterus, though among a number of the latter were some women who had had ten, seventeen, and even twenty confinements.

"I have long ago confirmed Aran's assertion," Tilt says, "respecting the frequency of uterine disease in those who do not suckle."[3]

Dr. Vedeler states[4] that of 38 women who, while nursing their children, had retroflexion of the uterus, only 5 had objective changes that could be ascribed to the flexion.

Duges, physician of the Maternity Hospital of Paris, states[5] "that in an epidemic of puerperal fever, which had many victims in his wards, women who nursed their children alone escaped the influence of the epidemic."

Ability to nurse. It is said that many women living in cities and large towns are too delicate to suckle, that their milk would be insufficient, and that the health of both mother and child would be injured.

A. Schoeff-Mereri, in a communication to the *British Medical Journal*[6] on the histories of upward of eight hundred nursing women with nurslings, stated that there was "abundant milk in thin and delicate constitutions. Some of the women were very healthy, not in the least affected by suckling, and the milk had excellent effects."

It has been shown that lactation does not induce anæmia, as has been generally supposed. "In a perfectly healthy nursing woman, with good hygienic surroundings and abundant nutritious food, the number of red blood-globules is not diminished."[7]

Influence of physician and monthly nurse in inducing women to suckle. The proportion of mothers who nurse their infants depends largely upon the influence exerted over the patient by the physician and the monthly nurse in charge. For instance, obstetricians whose practice has been exclusively among the upper and middle classes have given me the following figures with regard to the proportion of women who in their practice have nursed their babies. One physician stated that not more than 1 in 10 nursed; two, 1 in 5; three, 1 in 4; one, 1 in 3; one, 1 in 2.

One of the oldest and best-known obstetricians of New York, and one whose practice for the past twenty years has been exclusively among the wealthy classes, told me that nineteen-twentieths of his patients nursed their children. One nurse of large experience tells me that about one in five of her patients nurses the baby. Another has had twelve patients in succession among the upper and middle classes, all of whom have suckled. Still another example is that of a widow, who has had children of her own and nursed them, and who has for the past twelve years been an obstetric nurse among the upper classes, and has never had a patient who could not nurse successfully.

On the other side, a monthly nurse who has been much employed by physicians who recommend wet-nursing will almost invariably succeed in inducing a young mother, with her first child, to engage a wet-nurse. I have become so positive of this that I never have a woman with such a propensity care for a patient of mine in her first confinement.

Night nursing. One of the reasons why so many mothers have an insufficient milk-supply is the exhaustion consequent upon night nursing. Women of average health and robustness, living in cities and large towns, should not attempt to nurse at night, nor even have the child in the same room with them. This will insure their having the necessary eight or nine hours of uninterrupted repose and refreshing sleep. This ought to be an invariable law, and cannot be too strenuously insisted upon.

With good hygienic surroundings, invigorating open-air exercise, exposure to sunlight, early hours, and abundance of nourishing food before confinement and during the lying-in period, most women not actually diseased can supply part nourishment, at least, for their infants.

Mixed feeding. The deficiency may be made up by judicious hand-feeding. The notion that breast- and bottle-feeding should not be alternated, or combined, is not founded on fact.

Paramount importance of nursing during first weeks. Even where a mother's health will not permit her to nurse her child up to the usual time for weaning (eight to ten months), it is *peremptorily* important that she should do so during the period of uterine involution—this process of resolution occupies from six weeks to two months. We have already seen that suckling during this period is not only preventive of immediate accidents to the mother, but also of chronic, incurable disease.

Out of 575 confinements at the dispensary at Lyons, France, there was only 1 death. The Committee on Confinements, in their report, state: "It is, indeed, remarkable that the dangers due to confinements, and especially embolism, rarely occur except during the first three weeks."[1] In case of some hindrance to lactation, the committee think it important to induce the mothers to nurse their children fifteen days, or three weeks, on account of the beneficial influence that the flow to the mammary glands has to prevent congestion of the pelvic organs.

Charles West says: "The mother who nurses her little one, even for a month, avoids thereby almost half the risks which follow her confinement."[2]

It is precisely at this time, also, that the tender age of the child renders the mother's milk most necessary for its safety. Infant mortality is greatest during the first months of life.

The following figures show the high death-rate in infants during the first two months, and consequently the great risk incurred by a precarious mode of feeding, and the importance of giving the child its natural nourishment during this critical period.[3]

	Death-rate per 1,000.
One month and under	792.24
One month to two months	346.69
Two to three months	216.70
Three to four months	193.36

Of 100,000 children, 13,825 died during the first three months, and 3,649 during the succeeding six months.[4]

3. *Abstention from suckling one great cause of criminal abortion.*—Another consideration of supreme importance which ought to induce physicians to pertinaciously urge mothers to suckle is its influence in preventing frequent pregnancies and abortion. Conception rarely occurs in a nursing woman who does not menstruate. If the patient has given due attention to hygiene and diet, and her health is kept vigorous, menstruation is almost always checked for several months during lactation.

Of 1,327 women, only 125 (9.5) menstruated while nursing. Of these, 40 were married and 85 not married. Among the latter, at least, it is reasonable to presume that many had insufficient care.

Of 312 multiparous nurses, 18 menstruated during first six months; 18 during first six to eight months; 22 during first eight to ten months; 29 during first ten to twelve

[1] F. A. Aran: Traité des Metritis, p. 77.
[2] M. Gubian, Jr.: Gazette Méd. de Lyon, 1867, p. 48.
[3] Tilt, Edward John: London Lancet, August 12, 1876, vol. ii., p. 217.
[4] Schmidt's Jahrbucher, 1882, Band 193, pp. 42, 43.
[5] Brocard: L'Allaitement Maternel, p. 51.
[6] February 20, 1858, p. 153.
[7] Observations with the Hæmacytometer upon the Globular Composition of the Blood and Milk, Cartwright Prize Essay, 1881.

[1] Report of 575 Confinements by the Committee of the Dispensary at Lyons, Gazette Méd. de Lyon, 1867, pp. 47, 48.
[2] The Mother's Manual of Children's Diseases. London, 1885.
[3] Paper on Infant Mortality, Report of Boston Board of Health, p. 53, 1876.
[4] Deschamps, T. A.: De l'alimentation de la première enfance et du Rachitisme, p. 29. Paris, 1859.

months; 28 during first twelve to fifteen months; 197 did not menstruate till after fifteen months.[1]

Those who do not suckle generally have frequent pregnancies, and this is one of the causes of a crime not very uncommon around us—abortion. In the days when a mother who did not suckle was the exception, abortion was almost unheard of. Even now, in any locality where mothers, as a rule, nurse their children, abortion is rare. In localities where wet-nursing and artificial feeding are the prevailing modes of bringing up children, it will be found that women frequently solicit abortion.

4. *When should a woman not nurse her child?*—There are, however, many cases in which a woman should not nurse her child. Pulmonary phthisis, well-marked scrofula, and cancer are contra-indications to nursing; an epileptic mother must not suckle her child; and women who are of a nervous temperament and are easily excited will frequently have to be induced to give up nursing. When it is clearly shown that the mother's milk disagrees with the child, she should abstain from suckling; but not until every effort has been made to alter and improve the quality of the milk, such as attention to kinds of food and drink used by the mother, change of scene and air, tonics, and perhaps dilution of the breast-milk by giving to the infant barley- or lime-water just before nursing. If all these are tried and found unavailing, then artificial sources should be resorted to. Acute illness of the mother does not always necessitate separating the child from the breast. I attended a patient with a severe attack of acute articular rheumatism, which in time involved nearly every joint, and lasted several weeks, and her infant was nourished from her breast only, during the entire period, and he remained in excellent health. I have seen two mothers ill with diphtheria nurse their children—one four, and the other seven and a half months old—and these children did not contract the disease, and both thrived. In all such cases, however, it is advisable to take the child from the breast, if the mother will consent to it; and it is the duty of the physician to apprise her of the danger incurred in suckling the child; but we should not be too persistent, nor have the child separated from the mother in violation of her continued determination to exercise her sacred privilege, even at her own risk.

These cases do not in the slightest conflict with the law that the great majority of women can and should suckle their own offspring. It follows that it is incumbent upon the physician to instruct every mother that, for her own safety during the lying-in period, and for the sake of her future health, she ought to nurse her child. It is a duty which she owes to her family as well as to herself.

> "Accuse not nature, she hath done her part;
> Do thou but thine."

II. WET-NURSING.—1. *Its influence in increasing infant mortality:*—When a mother cannot nurse her child, shall we recommend it to the perilous care of that most remarkable and incomprehensible of creatures, the wet-nurse; or shall we have recourse to that method over which we have complete control, of which we can have no distrust, and which involves no hidden ways—hand-feeding? In New York physicians generally recommend the former.

Wet-nursing is a many-sided subject, and it has not received that conscientious consideration which its importance demands. In the first place, the employment of a wet-nurse, and the consequent desertion of two children by their proper mothers, is the main cause of the high rate of infant mortality. Wet-nursing, in its influence on infant mortality, is a two-edged sword, as the probability of death during the first year of life is materially increased in both the *foster-* and the wet-nurse's child. One would naturally suppose that the health and life of an infant would be equally safe, whether nursed by its own mother or by a healthy wet-nurse; but the following pages will show that this is not the case.

Mortality among maternal and wet-nursed children. Below will be seen the results of maternal *versus* wet nursing in 422 infants, covering a period of five years. Mortality among infants nourished by mother, 16 in 100; mortality among infants nourished by wet-nurse in family, 28 in 100.[1]

Later observations, from 1872 to 1879, on 600 infants. Mortality among infants nursed by mother, 10 in 100; mortality among infants nursed by wet-nurse in family, 26 in 100.[2]

In Montpellier, France: Mortality among children nursed by mother, 10 in 100; mortality among children nursed by wet-nurse in family, 15 in 100.[3]

Süssmilch says that the mortality among children nursed by the mother and those nursed by a wet-nurse is as 3 to 5.[4] Ullersperger differs but little from Süssmilch in his conclusions. He says that the mortality among children nursed by the mother and those nursed by a wet-nurse is as 4 to 5.

In Paris: Mortality of infants nursed by mother, 15 in 100; mortality of foster-children placed and watched over by Directory of Nurses, 1839–58, 29 in 100;[5] mortality of foster-children placed and watched over by Directory of Nurses, 1859–64, 33 in 100.[6]

In one of the foundling hospitals of France: Mortality of children nursed by their mothers, 6 in 100; mortality of children nursed by workhouse nurses, 36 in 100.[7]

A confirmatory fact applies to 6 twins (twelve children): 6 were nursed by their mothers, and all did well; 6 were wet-nursed—3 died, and of the remaining 3, 2 at twelve months were looking puny and delicate as if they could not live long, the 6th was quite healthy.[8]

The results from different foundling asylums, compiled by Friedman, show the following: If nursed by mother, 18 in 100 die; if nursed by wet-nurses, 30 in 100 die.[9]

In Lyons, France, children nursed by their mothers, the mother receiving aid from city authorities, 21 in 100 die; children given out to nurse and watched over, 35 in 100 die.

"Dr. Benoiston de Châteausneuf has shown that the mere substitution of a hired wet-nurse's for a mother's milk increased the mortality 10.6 per cent."[10]

This increased death-rate in foster- over maternal-nursed children does not reveal all the evil done to the wet-nursed baby. His future health and development are affected thereby. "These children [nursed by mothers] were incomparably better-looking and healthier than those who were intrusted to wet-nurses."[11]

2. *Causes of increased death-rate in foster-children.*—It has been distinctly and definitely proved that there is a higher death-rate among wet-nursed-babies, even under the most favorable circumstances, than there is among those who have had the care of their mothers. To one who has attentively observed the devious and irregular methods put into practice by nineteen-twentieths of these women, there is ample explanation of this increased mortality. The milk of a hired nurse, whose passions, emotions, nervous organization, and whole constitution are totally different from those of the mother, often proves to her child an unwholesome diet. While the milk of a wet-nurse may agree perfectly with her own offspring, it does not follow that another child will thrive upon it. He frequently suffers from indigestion, colic, and other disorders.

Andral, Soemmering, and others have related curious

[1] Archives Générales de Méd., Paris, 1855, vol. ii., p. 613.

[1] Bull. Acad. de Méd. de Paris, 1880 (2d series), vol. ix., p. 571.
[2] Ibid., 1880 (2d series), vol. ix.
[3] De l'Alimentation Vicieuse dans ses Rapports avec la Mortalité de la première enfance, p. 36. Montpellier, 1878.
[4] Gerhardt's Handbuch, p. 326.
[5] De l'Alimentation Vicieuse dans ses Rapports avec la Mortalité de la première enfance, p. 36. Montpellier, 1878.
[6] Dr. Denis-Dumont: Archives Gén. Méd., vol. ii., p. 105, 1867.
[7] C. H. Routh: British Med. Journal, February 6, 1858, pp. 104, 105.
[8] Ibid., Jan. 16, 1858, p. 50. [9] Journ. für Kinderkrankheiten, vol. lii., p. 163.
[10] London Lancet, October 24, 1857, p. 421.
[11] Report on 575 Confinements of the Dispensary at Lyons, Gaz. Méd. de Lyon, 1867.

instances in which the milk of a nurse is well digested by her own children, and not by others.

Andral relates that "the milk of a woman who suckled her own children without inconvenience, produced convulsions in other children." [1]

"The milk of a woman, which agreed very well with her own children, caused convulsions to others who partook of it" (Soemmering).[2]

"The milk of a woman may be perfectly good for a particular child and exceedingly bad for another." [3]

"A lively-looking, stout child, with firm muscles, and fat, cannot certainly have been fed on bad milk; but you must not imagine that the foster-child of such a nurse will likewise become strong. The individual peculiarities of children play an important part in this respect, and often upset all prophecies and all calculations, however reasonable they may appear." [4]

"It is an often-observed fact that the child of a feeble mother will prosper at the maternal breast and grow excellently, while a strange child . . . would thrive under no circumstances." [5]

Every physician who has had much experience with wet-nurses, and has been in the habit of jotting down his observations on them, has noted many, if not all, of the incidents here related.

Wet-nursed babies are usually colicky, have irregular bowels, and restless nights, when not tampered with. This is one reason why many nurses have to be tried in succession, but what becomes of the poor baby who is nursed by a dozen nurses in as many days, all of whose milk disagrees with him? "It is seldom that the first nurse suits. Often a large number have to be tried. I know of an instance where a change had to be made thirteen times in two weeks." [6]

There appears to be a general impression among physicians that it is a matter of indifference how frequently the wet-nurse is changed; some practitioners say that they would discharge a wet-nurse as they would any other servant. It is a common saying that you may with impunity have a "new one every day in the week, and two on Sunday." In the individuality of woman's milk, in the idiosyncrasies of the child, and in the change of nurses, we have, then, some explanation of the augmented mortality in foster-children.

Mental condition of wet-nurse. Most authorities recognize the influence of violent emotions in a woman giving milk upon a nursing child. The following incidents will show how grief or other mental disturbance will affect the mother's milk. I was asked to go in great haste one evening to see a dispensary child, whom the mother believed to be dying. While in this distressed state she placed her eight months' old infant to her breast; the baby had been perfectly well up to the moment of the mother's nursing it. While nursing it had a convulsion, and when I arrived to see the older child the infant was dead.

Another case is that of a child of Mrs. M——, the mother of seven children, all born healthy. When the last child was twenty-four hours old Mr. M—— died suddenly. The first time the infant was placed at the mother's breast after this sad occurrence it had a convulsion, and has been subject to them ever since. The six other children are living and are well. All were nursed by the mother; none of them ever had a convulsion. Family history good in every detail.

One Sunday afternoon I was hastily summoned to a child in convulsions. Upon entering the room I saw the child on its mother's lap, the convulsion having subsided; it appeared well, and a careful examination elicited no cause for the convulsion. The spasm had come on immediately after nursing. I told the mother that her milk was the cause of the fit; further inquiry brought out the fact that, immediately before nursing, the husband and wife had quarrelled.

A nursing woman, then, should be of a contented and cheerful mind, as that which frets or excites her will morbidly affect her milk. How much more apt is a wet-nurse, who usually is an unmarried woman from the country, home-sick, and looked down upon by the servants of the house, to have a sudden change of temper and her milk to be injurious to the nursling.[1]

She is apt to have frequent disputes with the other servants, and after such disturbances the baby has colic, restlessness, and sometimes convulsions.[2]

Beside the novelty of the nurse's new surroundings and her most unnatural position, if her child is living, and she is possessed of one spark of moral feeling, she is constantly a prey to anxiety on its account.

This state of mental depression must alter the quantity and the quality of the lacteal secretion.[3]

Many a sleepless night of unknown origin, many attacks of vomiting, diarrhœa, and colicky pains have as their source some mental disturbance in the nurse, who is wholly unsuspected as the cause.[4]

Influence of food and habits of wet-nurse. We select for a wet-nurse a strong and robust-looking woman, generally from the country, one who has previously been accustomed to hard work and fresh air and whose diet has been most simple. Suddenly she is transposed from a life of toil to one of comparative inactivity and confinement, usually to a close and overheated room, with an abundant supply of food, largely animal, and often an allowance of wine or porter, in order that there may be a copious flow of rich milk. The natural result is that the woman eats and drinks to excess, and this, in connection with her idle life tends to produce not a healthy, but an unwholesome fluid.

It has been proved that the sedentary life of the nurse alters the chemical properties of her milk, that instead of being neutral or alkaline, it becomes excessively acid, as does the milk of stall-fed cows.[5] The skin and liver of the nurse become torpid, her bowels constipated, and her lacteal secretion contaminated with waste matters.

It has been shown that the rate of infant mortality is less during a time of trade panic, when provisions are high — but not deteriorated in quality — employment scarce, and wages low, than it is during an epoch of prosperity and abundance.

"Faulty diet and repletion, together with the intemperance of parents, both in eating and drinking, are much more pernicious in their effects upon infantile health and life than the spare and simple regimen which straitened circumstances impose." [6]

A mercenary nurse is usually so anxious to keep her situation that she is generally the first to perceive that the child is not thriving, and she is apt to give artificial food surreptitiously, or, finding that she has insufficient milk, or that it disagrees with the child, making it fretful

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[1] Andral: Leçons Orales. Bouchut, p. 74.

[2] Soemmering: Elements of Health and Principles of Female Hygiene, p. 41. Edward John Tilt, M.D. London, 1852.

[3] Trousseau's Clinical Med., vol. ii., p. 466. Philadelphia, 1873.

[4] Kehrer: German Clinical Lectures, pp., 362, 363.

[5] Vogel, Alfred: The Diseases of Children, p. 31. New York, D. Appleton & Co., 1885.

[6] Cleveland, C.: New York MEDICAL RECORD, May 3, 1884, p. 485.

[1] "Often have I been astonished, after choosing nurses with abundance of milk, to find the secretion cease a few days after having given up their own child for a strange nursling" (Cazeaux, Theoretical and Practical Midwifery, p. 1,066, Philadelphia, 1869).

[2] "It is a fact that those children who drink at the breast of a wet-nurse who is mentally excited soon after begin to cry violently, suffer from colic, get diarrhœa, and are sometimes attacked by convulsions" (Vogel, p. 37, D. Appleton & Co., New York, 1885).

[3] "Under sudden and violent emotion, the secretion of milk may actually become as poisonous as it does in malignant puerperal fever, producing at once the death of the infant. . . . *A slower process of mental depression, however, will not be less injurious or fatal in the long run*" (Routh, Medical Times and Gazette, May 21, 1859, p. 495).

[4] "I was sent for in great haste to see an infant in a convulsive fit, and on inquiry found that the nurse who was employed to suckle the infant had been guilty of some misconduct, for which she had been severely reprimanded. Soon after this mental agitation the infant was suckled by her, and that occurrence was followed by the convulsive attack referred to. The late Sir Richard Croft, who had the immediate care of this child, informed me that he had *frequently* known similar cases" (Mr. Wardrop, in London Lancet, July 20, 1833, p. 522). Baumes remarks that he was informed by one of his professional brethren that his child died suddenly of convulsions after having been suckled by a woman who had been violently exasperated (North, John, Convulsions of Infants, pp. 98, 99. London, 1826).

[5] Journal des Connaissances médico-chirurgicales, 1839, De l'Alimentation de la première enfance et du rachitisme, Paris, 1859, p. 33.

[6] Med. Times and Gazette, 1863, vol. i., pp. 106, 107.

and restless at night, it is more than probable that she will fall back upon another of the evils of wet-nursing—the artful use of stimulants.

Stimulants and narcotics. One would suppose that neither of these devices could be resorted to without a watchful mother detecting it at once. The following instances show, however, that such a thing can occur: A young woman, obtained from the New York Maternity Hospital, was with Mrs. R—— as wet-nurse for four months. During this time the family physician told the parents that he suspected her of using stimulants. The mother thought the suspicion groundless, until one day, after having received her wages, the nurse went out and became so intoxicated that she was arrested. A similar case occurred in Dr. M——'s family in this city. The nurse was from the first month suspected of using stimulants, but nothing could be proven against her until she had been in her situation six months, when she came home one night very much inebriated.

This practice of the nurse taking stimulants and then placing the child to the breast, is more common than is generally supposed. There can be no doubt that alcoholic stimulants, in any form, injure a young child; when taken by the nurse they are, in effect, administered to her nursling, and it will at once fall asleep. Vernay relates a very striking case of the mischievous consequences which may result from the abuse of wine-drinking in a nursing woman. A child was taken with convulsions, and during five days every possible means was uselessly employed to relieve it. Vernay learned that the nurse drank six or eight glasses of French wine during the day, and often several more at night. The convulsions ceased as soon as she was no longer allowed to drink wine.[1]

Dr. Amarion cites the case of a child, three weeks old, who had convulsions without discoverable cause. After careful investigation by the physician, it was shown that the wet-nurse secretly drank four bottles of wine daily. The physician had the nurse watched, and allowed her only half a bottle of wine, and one bottle of beer a day. After a few days the child was entirely well.[2]

A similar case came under my observation, where all the symptoms of excitability in the child disappeared after the woman was taken to the country, where she could not obtain stimulants.

"On one melancholy occasion I was called out to see a lady's *dhye*,[3] who was taken ill; indeed, she was supposed to be dying of the cholera. When I arrived I found the woman in a state of inebriation. She was a wet-nurse to a lovely infant, who was taken suddenly ill on the following morning, and died a few hours after."[4]

Opiates. "We have known," says Dewees, "a *number* of cases where laudanum was administered with so much cunning as to elude detection for a long time, even after suspicion had been excited."[5]

The author then relates the following striking instance: On visiting a child, nine months old, he noticed the sleep to be that of opium. The mother and nurse both asserted that the infant had had no opiate of any kind. The nurse was never for a single instant alone with the child. When the mother left it, she placed a young woman in the room—this person had never seen the nurse give the child anything. Dr. Dewees, still confident that an opiate was given, requested the mother to make an examination of the nurse's pockets when she was asleep. The result was the finding of a small vial of laudanum in a pocket made within the larger one, for the express purpose of holding it. The young woman had seen the nurse apply this vial to her nipples every day, and had been told by the nurse that it contained tincture of myrrh, which she used to harden them.

Recently I saw in consultation a wet-nursed baby, seven months old, with obstinate constipation, there having been no movement on one occasion for ten days. Everything had been tried with no effectual relief. After careful questioning I became convinced that it had been given some preparation of opium by the wet-nurse, as the constipation dated from the time of her appearance in the household, when the baby was about a month old. Directions were given that the nurse should be watched and never left alone with the child. There was no recurrence of the constipation after this.

I have seen many wet-nursed children treated by excellent physicians for liver complaint, or for derangement of the stomach, where the nurse alone has been responsible for the symptoms, having given spirits or opiates to the child.

Apropos of this, Keating says of the wet nurse: "She must be watched and guarded as the sacred cows of India; watched in her diet, in her habits, in the control of her feelings."[1]

I do not doubt that the wet-nurse, in her ignorance, finds reasons sufficient to her conscience for administering these poisons to her foster-child. Is she more to blame than the woman who has robbed her child of its mother's bosom, and left it to die of neglect and starvation?

On the transmission of disease by the wet-nurse. In choosing a wet-nurse it ought to be known from personal and family history if there is any disposition to mental derangement, scrofula, consumption, cancer, or syphilis. These diseases are hereditary from parent to offspring, and they may be conveyed to the nursling through the milk. Every ramification of the nurse's family should be made familiar to the physician who takes the responsibility of recommending her. It may be said that a physician can detect the presence of these diseases. One who is about to furnish a patient with a wet-nurse may claim that he has learned her history clearly, fully, and accurately from the doctor who attended her in her confinement; but the following instances refute this:

Physicians who have been connected with the Maternity Hospital, on Blackwell's Island, tell me that women who are not allowed, on account of disease, to go from there as wet-nurses, have frequently, to their personal knowledge, obtained such positions through agencies for wet-nurses in the city.

Syphilis. I recall several striking instances of this kind; one, that of a syphilitic woman, who brings her infant, suffering from congenital syphilis, to my clinic at the Demilt Dispensary. She is generally accompanied by her foster-child, whom she obtained, from a public institution in New York, immediately after the death of her first-born child. A proof that the woman had syphilis when she procured the child to wet-nurse, is that the little girl does not now contract it from being in contact with the infant, who has the worst form of syphilis—mucous patches, etc.

A physician, connected with a public institution in New York, furnished me with the following particulars: He treated a woman for syphilis, who, after the disappearance of outward symptoms, discontinued treatment. Later, she came to him for a letter recommending her as wet-nurse, which he refused to give, explaining that she would endanger the life of a nursling. Some weeks after, she reappeared, bringing with her a child she had obtained from a hospital to wet-nurse. These women had been examined, and were selected as healthy wet-nurses by physicians who are, by training, experience, and skill, as competent as any in this city to detect syphilis in a nursing woman.

Syphilis contracted during pregnancy may leave no mark or symptom by which it can be detected. I am constantly seeing mothers of syphilitic infants who give no history of syphilis, have never had any outward mani-

[1] Am. Jour. Obstetrics, 1873–74, vol. vi., p. 676, from Lyon Médical, 1873.
[2] Central Zeitung für Kinderheilkunde, 1877, p. 38.
[3] An Indian nurse.
[4] Corbyn: London Lancet, September 12, 1828–29, vol. ii., p. 760.
[5] Dewees, Wm. P.: A Treatise on the Physical and Medical Treatment of Children, pp. 57, 58, 59, first edition. Philadelphia, 1825.

[1] The Care of Infants, p. 25. Philadelphia, 1881.

festation of the disease, and in whom the most thorough examination will not bring to light any evidence of previous or existing disease. These mothers nurse their own infants with impunity. An infant does not commonly present any symptom until a month or six weeks after birth, and during this period any physician is liable to select its diseased mother as a suitable and healthy wet-nurse. A child with such a foster-mother is ill-nourished, anæmic, feeble, with flabby muscles and a listless expression, and sometimes the healthiest infant born will gradually atrophy and die.

Dr. Donné relates the following instance: "A certain family had taken all the ordinary precautions to procure a good nurse for a first-born child. The woman was young, ruddy, and apparently in perfect health. At the end of one month several pimples were observed on the child's body." The child had syphilis, from which it ultimately perished.[1]

Professor J. Lewis Smith says: "Constitutional syphilis is common in the class of women who present themselves for wet-nursing; it is often latent, or its symptoms are easily concealed, and it is communicable by lactation. The cases which have accumulated in the records of medicine are numerous in which infants, born of healthy parents, have been fully syphilized by lactation from diseased nurses."[2]

Scrofula. A scrofulous nurse will generally taint her charge, and it will not thrive; yet many scrofulous women, or those of a scrofulous family, are selected as wet-nurses.

In the spring of 1884 a young woman, with the following remarkable history, came to my office to be treated for a scrofulous neck: About two years and four months before coming to me for treatment she gave birth to a child which died when five weeks of age. She then became wet-nurse to a baby whose mother was ill. At the end of six weeks, the mother having recovered, the nurse was discharged. A second situation was secured, where she nursed a baby for eleven months, when it died. A third position was easily obtained; here she nursed the baby thirteen months, when it too succumbed. Of four children nursed by this woman only one survived, and this one was returned to the breast of a healthy mother after six weeks of separation, owing to an acute illness. This woman acted in the capacity of wet-nurse for two years and three or four months after one pregnancy. Her milk was fourteen to fifteen months old when she went to her third foster-child, an infant aged a few days. Her cervical glands were much enlarged during the entire period. She had been examined by four physicians, two having examined her before she went to her second situation. Not *one* of these physicians, nor *one* of the families, ever *suspected* that she had scrofula. The deceptive creature told me that she had always taken great care so to dress her neck that the swellings could not be seen. She was most anxious to be "cured quickly," before her milk dried, that she might continue wet-nursing! I asked her how she would manage about the age of her milk, as no one would employ her to nurse a young baby? Her reply was that she could borrow a baby from some acquaintance!

In June, 1884, baby N——, aged eight weeks, was brought to me at the Demilt Dispensary, gradually dying from scrofula and starvation; the mother was a wet-nurse in a family who lived on Fifth Avenue. Baby N—— died about three weeks after I first saw her, and I have since learned that the unfortunate foster-child subsequently died also.

In these cases there certainly was scrofula, which was not detected by the physicians who selected the wet-nurses. Dr. Donné says: After having selected a nurse, a model in appearance, coming from one of the healthiest families—a nurse to whom one of the most celebrated physicians of Paris had entrusted one of his children, and who had nursed another in a good family—after having received the assurance that she did not have upon her body the slightest trace of any affection whatever, there were found, on examining her, three scrofulous scars on one of her limbs; *and this is nothing in comparison with other examples much more to be dreaded.*[1]

In consideration of the ease with which these women obtain the situation of wet-nurse, and the carelessness with which many physicians recommend them, there must be many who are either grossly ignorant of the risks incurred by wet-nursing or shamefully indifferent to them.

Fate of wet-nurse's child. What becomes of the child that is thus deprived of its birthright? It is very difficult to obtain information regarding this question. The subject has not received the attention which it deserves, for the reason that those who are most and directly concerned will not, or dare not, consider it. Not one of the institutions in New York City from which wet-nurses are obtained is prepared to furnish definite statements, but by patient investigation much may be learned. I have had a large experience with these children at the Demilt Dispensary and at the University Medical College; all have been followed to their homes, and all have died. Not *one* child of a wet-nurse that has come under my observation at these institutions has survived the first few months. These cases are numerous, and their appearance has become to me so singular and so striking that I have, in many instances, as they were brought into the examining-room, pointed them out to physicians present "as a wet-nurse's starved baby." In each case the history has borne out the opinion thus cursorily formed, and the observation, "that death would be its fate," has in every instance proved lamentably true.

That mine has been the experience of others is shown by the following: In February, 1854, two ladies made inquiries of a leading physician as to the fate of wet-nurses' infants. His answer was: "As a rule, all infants of wet-nurses die, and generally from neglect."[2]

W. Tylor Smith said: "Recalling my own experience as an obstetric physician, I can scarcely remember an instance, in the course of twenty-five years, of the child of a wet-nurse, who was a single woman, living beyond infancy."[3]

Dr. Clarke says:[4] "In some families six, in others eight, wet-nurses had lost their own children."

The following interesting history has just come to my knowledge. Four healthy children were born to a woman. She nursed the first and third child; they are both living and are well. The second and fourth child she put out to nurse, while she took the position of wet-nurse; the one lived two months, the other three weeks, after it was deprived of its mother's breast.

Below is given a clear case of deliberate infanticide. "Not long ago a mother left us to nurse in a private family. Her child, unusually strong and healthy, left the institution, and was given to the ignorant and superstitious care of a woman so foreign to our ways that she could not even speak our language. Her abode was a rear tenement-house. The child lived a week, dying from an ailment the cause and chief danger of which depended upon faulty feeding."[5]

I myself know that this method of infanticide is put into practice in New York many hundred times annually. Many wet-nurses who apply at agencies have been confined by midwives who keep lying-in-establishments, and are sent out as wet-nurses by these women to earn money to pay the expenses of confinement. The children are left at the mercy of the heartless hags who desire their death. Numerous instances of this kind have come under my observation.

[1] Mothers and Infants, Nurses and Nursing, by Dr. Donné, p. 104, Boston, 1859.
[2] J. Lewis Smith: Sixth edition, 1886, p. 45.

[1] Mothers and Infants, Nurses and Nurslings, p. 63. Boston, 1859.
[2] Thirty-second Annual Report of the Nursery and Child's Hospital, p. 13. New York, 1886.
[3] Proceedings of Harverian Society regarding Infanticide, British Medical Journal, January 12, 1867.
[4] Commentaries on Children's Diseases, by Dr. John Clarke.
[5] Annual Rep., 1886, of an Institution in New York, p. 45.

According to the last printed report of the Infants' Hospital on Randall's Island (1882) there were 263 children that were nourished at the breast, of whom 41 died during the year; and there were 375 that were bottle-fed, among whom there were 286 deaths. In the former the death-rate was less than 16 per cent., and in the latter over 75 per cent. Though all the mothers of these hand-fed babies were not wet-nursing, many of them were. In 1874 the deaths in Tours, France, in wet-nurses' children deprived of breast-milk, was 87 per cent. Dr. Carpenter, of Croydon, England, in the *Public Health Journal*, 1873, says that 90 per cent. of the children which are put out to dry-nurse by wet-nurses die after a few weeks of hand-feeding. The published mortality of foundlings in the Philadelphia Almshouse, a few years ago, was 100 per cent.! At the State Almshouse, Mass., the death-rate among infants deserted by their mothers sometimes amounted to 90 per cent.[1] Dr. Routh, in speaking of an infant nursery where the children of wet-nurses were taken to be dry-nursed, says: "The mortality was certainly four out of five, if not more."[2] In the Grey Nuns' Foundling Hospital at Montreal 73 per cent. died in 1860.[3]

The following is an instance of the shocking results of wet-nursing: "In the Department of the Gironde are two communes under similar hygienic conditions. In one the mothers suckle their own children; in the other a number of mercenary wet-nurses take in children from Bordeaux in large numbers to wet-nurse. In the first the mortality is thirteen per cent., in the last it is eighty-nine per cent."[4]

It is a noteworthy fact that during the siege of Paris, 1870–71, when it was impossible for wet-nurses to go from the country into the city, the death-rate in infants in the country fell from thirty-five to seventeen per cent., on account of the wet-nurses being obliged to remain at home, thus attending to their own children.[5]

The wet-nurse's child, then, usually lives in a starving condition until death releases it from its miserable existence. As many physicians know, these heartless creatures often witness the gradual languishing and final death of their children; they know the cause and the remedy, but are unmoved. The unnatural mother, who by force of her purse has robbed this dead infant of its birthright, turns to its mother and comforts her by saying that "the poor little thing is better off." But has anyone a right to make himself responsible for the death of a defenceless infant? Do not the people who employ wet-nurses instigate and encourage this stupendous crime?

If these foundlings do live in spite of being neglected and mismanaged, their constitutions are often irreparably injured, and in time they become a public charge.

That wet-nursing weakens the constitution of our adult population is shown by the following instances: At Château-Chinon, France, where the mothers go out as wet-nurses, thirty-one per cent. of the recruits for the Franco-Prussian war were found unfit for military service; while at Nevers, where the mothers nurse their own children, only seventeen per cent. of the recruits were unfit for service.[6]

If the investigations of others verify these statements this despicable evil should be checked, for "society ought to watch over children with the anxiety of the father of a family."

Moral objections; influence on wet-nurse. A large proportion of the women employed as wet-nurses in New York are single women, and from the country. After an investigation extending to all the agencies and institutions from which they are obtained, and inquiries of physicians and monthly nurses, I am sure that more than four-fifths are from the country, and nineteen-twentieths, at least, of all wet-nurses are unmarried.

Some people think that the influences and surroundings of a virtuous home will bring these fallen women back to a sense of morality. But is the comparatively short period during which every luxury, comfort, and flattery are poured upon them calculated to work reform upon creatures in whom weakness of character is their very life? How can these women believe that the families who employ them care for their moral condition, when they have no regard for the lives of their children? The following incidents show the indifference to infant-life which these circumstances create. My friend, Mrs. A——, seeing Mrs. W——'s baby being nursed by a wet-nurse, she turned to Mrs. W—— and asked her where the foster-mother's baby was? "Oh, it died—fortunately," was the light reply.

My friend, Dr. E——, has given me these details: The mother of a healthy infant went as wet-nurse in the family of Mrs. G——. Three weeks later the wet-nurse's child was suffering from inanition. The family being notified, they refused to take any interest whatever in the child whose life-blood was being drawn by their own babe, even refusing to furnish medicines and proper food.

A woman brought a baby, aged one month, to the Demilt Dispensary, October 22d, for treatment. Its mother is a wet-nurse in the family of Mrs. K——. The baby was suffering from congenital syphilis. I requested the woman to notify the family that the nurse might infect her nursling. The foster-child's grandmother was interviewed. She replied that *their* baby was doing well, and that it would be impossible to inform the nurse of her infant's illness! October 26th the baby died. The grandmother was seen again. This lady would not authorize a simple burial, but told the woman who had boarded the baby to get a certificate of death from me, and then take the dead baby in her arms to the Morgue! This is the most revolting of many shocking occurrences which have come to my notice. Here, again, the mother of a syphilitic child was selected as a healthy wet-nurse.

Very often these poor little waifs do not receive a decent burial, but are placed in a coffin of unplaned boards, and are carried away in a wagon and buried—who knows where? Perhaps nowhere! As far as I have been able to learn the mother is never allowed to attend the funeral of her child; she is not even informed of its death until after its remains are disposed of. This alone is most demoralizing.

It is almost unknown for one of these women to be retained in the family as an ordinary servant after her duties as wet-nurse have expired. It stands to reason that the indolent life which she has led, accompanied by every attention, almost always unfits her for the position of a common servant.

Thus she is not only bribed to forsake her child but she is unfitted to occupy that position in life she formerly held. None of a wet-nurse's experiences tend in the least degree to work reform in her. During the nine months to a year that she is acting as wet-nurse her only companions, when away from the house of her employer, are other wet-nurses whom she meets in the public parks, or girls with whom she was thrown in the institution or at the house of the midwife where her confinement took place. Thus in this capacity the facilities for acquiring knowledge of crime are so great that it is the very life to be avoided. By the time she is discharged from her position she is generally ready for another experience, and looks upon nursing as a business. Many of these women return to the institutions for a second and third confinement, with the expressed intention of going again as wet-nurse.

People make the employment of wet-nurses a charity! It is said that these fallen women *must* take the situation as wet-nurse in order to support their children.

[1] Report of Massachusetts Infant Asylum for 1879.
[2] British Medical Journal, January 12, 1867, p. 31.
[3] Ibid.
[4] The Sanitary Care and Treatment of Children, and their Diseases, p. 128, Boston, 1881.
[5] Gerhardt's Handbuch, vol. i., p. 29, and Nouveau Dict. de Méd. et de Chir., p. 169, Paris, 1877.
[6] Jahrbuch für Kinderheilkunde, p. 93, 1881.

This motive is put in the foreground in order that the selfishness of the real motive may be hidden.

In the Thirty-second Annual Report of the Nursery and Child's Hospital, 1886, I find the following: "One great difficulty we labor under is the want of wet-nurses. . . . Women, in the station they occupy, are seldom found with the maternal instinct strong enough to induce them to remain and nurse their own infants, when they can obtain high wages and enjoy the luxurious life of a wet-nurse in a private family." At Randall's Island Hospital the physician in charge said: "Practically we have not a wet-nurse for the foundlings, though we use every effort to have the children suckled."

Artificial feeding in institutions is the unavoidable outcome of wet-nursing in private families. There should be a law prohibiting these women from going from institutions as wet-nurses in private families; every healthy woman so placed should nurse, if necessary, two children, and the death-rate in infants would then fall more than fifty per cent. within the first year.

The following extracts prove that the nursing of two babies may succeed: "Each generally nurses one, and takes care of two babies in *addition* to her own. . . . Some of these have had enough breast-milk to be able to feed two babies without giving artificial food at all, and others have had to give but *very little* artificial food in addition to their breast-milk." [1]

The Fourteenth and Fifteenth Annual Reports of the institution (Massachusetts Infant Asylum) show that this plan continues to be successful.

If people will have a wet-nurse, they should have her bring her own child with her. This would give the two children an equal chance for life. The wet-nurse having her own baby at her breast, it would be an inducement to her to take care of her health; in fact, I believe that the death-rate of foster-children would be less if this plan were adopted than it is when the wet-nurse is separated from her child. If the wet-nurse's child is to be artificially fed, the mother of the foster-child ought to see and know that it is properly done, and she should make herself personally responsible for its life.

In speaking of reforming these women, a lady of large experience with them writes thus: "These women should be made to nurse their own infants." [2]

There are institutions where these unfortunate girls will be received with their children, provided they will assist in the care of other children until such time as they are able to support their children as well as themselves by honest labor. The child then becomes the mother's strongest moral tie. If the woman wishes to relinquish all claim to her child, there are institutions where it will be received, and no questions asked; and she is free to return to her home, where she is far more likely to reap the benefits of moral reform than she would be if she were to take the uncertain and degrading position of a wet-nurse.

Influence of wet-nurse in family. The wet-nurse is generally a young woman who has become illegitimately pregnant. Should we receive such a person as an upper servant in our family, and give her the care of, and allow her to become the foster-mother to, our child? Is this a proper example for the other servants? Their mothers would not allow them to associate with this woman, but in our houses they are made to feel that she occupies a place superior to theirs, with much higher wages, better clothing, and no heavy work; they must wait on her, in fact, everybody must acquiesce in her every whim, "for the sake of the baby." Is it not an incentive to vice to treat them thus? Is not this discouraging virtue and rewarding prostitution?

Influence on foster-child. Has the individual character of the nurse an influence on the future disposition and character of the child? If the milk of a woman under the influence of unusual emotion will induce restlessness, and even convulsions, in her nursling, do not all her feelings, passions, and emotions affect it? [1] Apart from, and beyond this, the life of the foster-mother is the child's life. The formation of character begins at birth. One who has lived with children, and carefully studied the development of character in them, will not fail to perceive that the influences of the first year are of as much, or perhaps more, importance than any other in their lives. Impressions then made, and feelings then formed, are ineradicable.

The following cases show that the individual character of the wet-nurse influences the future habits and character of the child. A medical student gave me this instance: His brother has four children, all boys; the first two and the youngest were nursed by their mother. The third was nursed by a young Irishwoman. He is entirely different in habits and in character from any of his brothers, exhibiting very decided Irish traits, which are so marked that they are noticed by all the friends of the family, even though they do not know of his having been wet-nursed. A second case is one in which a mother had four sons. She nursed three, but had an Italian wet-nurse for the youngest, who suckled the child for over a year. The four brothers are now men. The mother says her youngest son is different from his brothers, that he is of a more secretive disposition, and that he has traits acquired from his Italian wet-nurse. Another case of particular interest that has already been recorded [2] is that of twins, one nursed by the mother, the other wet-nursed. These children showed traits of character diametrically opposite, the evil habits of the child who was wet-nursed being clearly traceable to the foster-mother.

The practice of wet-nursing is now becoming so customary that even before the child is born the wet-nurse is spoken of; and the physician, who too readily falls in with his patients' unnatural and unfeeling impulse, makes inquiries and arrangements for the fulfilment of it. This has actually occurred in the practice of reputable physicians in this city, where the mothers were in excellent health.

It was decided before the birth of the infant king of Spain that the royal mother should not nurse her child. The London *Lancet*, commenting on this, says: "The royal mother was not to be allowed the natural privilege which is properly so prized by most mothers of lower degree—would that we could say so of all! But when royalty sets the fashion, what wonder is it that others, with no public or extra domestic duties whatever to attend to, and so entirely without excuse, hasten to depute the mother's duty to a stranger." [3]

That noble woman, the Queen of England, was nursed by her good German mother, the Duchess of Kent; and Victoria, in her turn, has watched and guarded over nine children as a true and loyal mother should.

It is an historical fact that the mother of Louis IX. of France suckled and brought up all her children. During an illness under which the queen labored, her infant son was placed at the breast of one of her ladies of honor; upon seeing it, the royal mother called for the young prince, put her finger into his mouth, and caused him to vomit the milk he had just swallowed, exclaiming, "Do you suppose that I shall suffer any one to take from me the title and office of mother, which God has given me?" She then placed the child to her own breast, and nursed him, notwithstanding her illness.

With these and other salutary examples before her, the unnatural mother of to-day will stand unconcerned-

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[1] Sixth Annual Report of the Massachusetts Infant Asylum, 1873, p. 20.

[2] Thirty-second Annual Report Nursery and Child's Hospital, p. 25. New York, 1886.

[1] "In the selection of a wet-nurse attention should also be given to her mental and moral habits. Cheerfulness, affection, veracity, and a proper appreciation of the responsibility of her situation enhance greatly the value of a wet-nurse. Not less important are habits of temperance and cleanliness. *I could cite cases of the most melancholy results from the absence of these traits*" (J. Lewis Smith, p. 47. 1886).

[2] London Lancet, 1867, vol. ii., p. 30.

[3] Ibid., May 29, 1886, p. 1035.

ly by and watch her child while it draws the breast of the lowest grade of her sex.

The cry, "I have no milk; I cannot nurse my baby!" is not limited, as it once was, to the upper classes; it is found in the mouths of the poor as well, owing to the force of example, and it is common for women in blooming health to bring to my dispensary class their sick babies, with their bottles, all giving this same excuse.

The lives of nine-tenths of the wet-nursed children are purchased at the expense of the lives of other children. The practice, therefore, of placing children to dry-nurse, either in families or in institutions, in order that the mother may go as wet-nurse, is iniquitous.

It is inexcusable and indefensible under any circumstances. It is the deliberate starvation of one child that another may live.

It is lamentable that a system so pernicious and injurious to the best interests of society should be tolerated, and even encouraged, by the most eminent and honorable members of the medical profession.

Briefly, then, we usually select a hireling to perform the mother's most sacred duty; one who occupies the lowest place in the social scale and in whom there is an absence of the moral qualities; usually one who has been, in some degree at least, a prostitute; one who can forsake her own child and take a stranger's to her breast; one who can witness the gradual starvation and death of her own child, and who may be a double murderess by poisoning her foster-child with opiates or alcohol! If, after being nourished from such a fountain, our child is perverse, froward, insolent, and has no regard for truth, who is accountable? Is not the mother who deprived him of her own pure, untainted breast, and who purchased for him instead a polluted and debauched stream?

It has been said that wet-nurses are a necessary evil. I believe them to be an *un*necessary and unmitigated evil; moreover, I believe, with certain rare exceptions, their employment should be suppressed.

CASES OF SOMNAMBULISM—THEIR CONSTITUTIONAL CHARACTER AND TREATMENT.

By A. D. ROCKWELL, M.D.,

NEW YORK.

Sleep-disorder, in all its varying phases, may exist, and yet the health of the individual remain apparently perfect. This, however, is believed to be true only within limits.

Excessive sleep or morbid somnolence is frequently observed in those whose brain-activity is below the average standard. In this respect persons of defective intelligence are like many of the lower animals, and to eat and sleep fill up the measure of their wants. It cannot be said that epileptics are, as a rule, subject to this morbid condition, but sometimes, as I have had occasion to observe, when the intelligence has been materially affected by repeated and long-continued attacks, the sleeping greatly exceeded the waking hours. An instance of this once fell under my observation so notably as to deserve almost the name of the "sleeping sickness."

The patient was a young lady aged about twenty. The attacks began when she was fifteen years of age—increasing in frequency until she was eighteen. Her memory became impaired, her speech less fluent, and in other respects she evinced a positive mental decadence. Her sleep began to be heavy and prolonged, and when I saw her she was accustomed to go to bed at five in the afternoon and sleep uninterruptedly until ten the next morning—a period of seventeen hours.

Strong coffee nor tea, nor any drug had the slightest influence in this case. The only measure that availed anything was the starvation method. Her appetite was voracious, and she ate greedily immediately on awakening and before retiring; if, however, she was compelled to go to bed supperless she slept neither so heavily nor so long. Sleep of a more positively unnatural character, such as somnambulism and somniloquy, is entirely consistent, up to a certain point, with a high degree of mental and physical vigor, but it may be, and frequently is, indicative of profound constitutional disturbance, sometimes inherited and sometimes acquired.

The phenomena that we observe under the name of hypnotism bear a very intimate relation to those of somnambulism.

In both conditions there seems to be a remarkable concentration of mental and physical energy. The powers of the mind in their entirety cease to act, and in their stead there exists an unerring intensity and directness of purpose.

In somnambulism, as in hypnotism, we have, therefore, a state of unconsciousness only partial in its area. The greater portion of the brain is in profound abeyance, and, physiologically, a condition of affairs may be supposed to exist similar in both states, arterial contraction and consequent anæmia prevailing throughout the larger portion of the brain, while the extraordinary mental acuteness in certain directions points to some definite localization of arterial activity. In both somnambulism and hypnotism, sight, so far as it relates to the dream or to the special direction given to the thought, is perfect; but, as is well known, unrelated visual impressions are taken cognizance of in neither condition. Notwithstanding all that has been written upon morbid somnolence and somnambulism, the fact that they not only lead to constitutional disturbance, but are, in the beginning, frequently symptoms, and symptoms only, of some obscure, deep-seated, constitutional susceptibility of the nervous system, has not, it seems to me, been sufficiently emphasized.

Especially suggestive of this statement relating to the constitutional origin of the symptoms are the recorded histories of several cases in which there existed a very interesting alternation of symptoms. The constitutional susceptibility remaining unchanged, the attacks would alternate from seasons of sleep-walking, insomnia, and neuralgia. A case in point was related to me only lately by the mother of the patient, a girl fifteen years of age, who had been the subject of periodical attacks of somnambulism for four years past. For nearly a year she was accustomed, almost every night, to get out of her bed in her sleep and walk around the room, and sometimes would open the door and go to distant parts of the house.

Finally she ceased these nocturnal rambles altogether, but in their place were developed a severe facial neuralgia, great tenderness along the spine, and marked hysterical symptoms.

After six months, or more, of this form of suffering, the neuralgia and spinal irritation disappeared altogether, but the habit of sleep-walking returned as of old; this alternation being repeated several times. It will be observed that this interesting alternation from one condition to another was nature's own work. During all the periods of change, from sleep-walking to neuralgia and spinal irritation, there must have been some vice of constitution acting as a causative force, and the symptoms from which she suffered were simply the varying manifestations of one and the same cause.

Admitting, then, that the various sleep-disorders—somnambulism especially—are in many instances merely special manifestations of some constitutional disturbance, it becomes evident that our efforts for the relief of these annoying symptoms must be general, and not local. More specifically, our efforts should be in the direction of imparting tone to the system generally, especially to the central nervous system—brain, sympathetic, and spinal cord.

Drugs alone are, as a rule, insufficient, and need be

used only so far as they aid in correcting associated symptoms, such as a constipated habit, indigestion, etc. In a very considerable experience with this class of cases I have found electricity in some one of its forms, or by some one or more of its methods of application, to be in several cases a most effective remedy. The following case came under my observation and treatment, for a variety of nervous symptoms, during my service at the Woman's Hospital some years ago. I give it in some detail, since it illustrates, as very few cases do, the constitutional character of the symptom we call somnambulism, and the marked benefit that may accrue from the treatment that has been indicated.

Miss K——, thirty-four years of age, began to be a somnambulist when six years old, and until 1876, a period of nearly twenty years, had been in the habit of walking in her sleep nearly every night. When at boarding-school this habit continued for some time without discovery. Her room-mate had several times noticed that she got out of bed and moved about, without suspecting the true condition, and the patient herself hesitated to make a confidant for fear she would be avoided. She regarded the habit in the light of a disgrace. It was only when on one occasion she opened the window and rushed to the roof, impelled by the fear of fire, that her real condition was discovered by her room-mate. As a child at home she was not infrequently punished, in the hope that the habit would thereby be broken, as if the rod could cure a pathological condition. With the same end in view she had been doused in cold water while still asleep, with no other effect than to increase a very decided nervous susceptibility. When the character of her nocturnal wanderings became apparent, she was, as a rule, closely watched, and led back to bed or accompanied in her movements. Occasionally, however, she would awaken and find herself alone on the stairs or in the hall, when she would be immediately seized with a severe nervous chill, and sometimes with dizziness. In 1877 she arose one night while her companion was sleeping, went to the roof, and slid down a long slender pillar to the ground. She was found walking along a narrow fence and was immediately carried into the house.

Persistent efforts were made to awaken her, but without avail. She would answer "yes," but did not become thoroughly conscious until morning. From that time onward, singularly enough, she never, so far as was known, arose from her bed while asleep, but immediately she began to suffer from nausea, from occasional vomiting, and from paroxysms of intense headache, which continued with varying intensity until I saw her. These paroxysms of pain and nausea occurred every week or ten days, during which time she could keep nothing upon her stomach. I subjected this patient to tri-weekly applications of the galvanic current, by the method of central galvanization, and the benefit accruing from their use was as prompt and as marked as in any case that had come under my observation. From the date of the first application until she left the hospital, a period of two months, she suffered no more from these paroxysmal seasons of intense pain. For the nausea much relief was obtained from the administration of oxalate of cerium. The patient promised to write and inform me of her condition, and especially if there should be a recurrence either of the somnambulism or the more distressing symptoms of cephalalgia, nausea, etc., that supervened upon the cessation of the sleep-walking habit. I have heard nothing from her, and infer that the recovery was permanent. Another case kindred in character was brought to me in October, 1885. The patient was a girl sixteen years of age, possessing a fine, sensitive organization, and unusually bright and precocious.

Physically she was well proportioned, and her nutrition seemed to be fair, but a decided anæmia was observable, more especially as manifested by the appearance of the mucous membrane. She was nervous, painfully excitable, easily moved to tears, and complained of great lack of endurance.

The menstruation was regular enough, but was much too profuse, and attended by acute pain.

Since the age of seven this person had, without lengthened intervals, been the victim either of somnambulism or incontinence of urine. She was never annoyed by both at the same periods of time, but either one or the other symptom always existed. Incontinence was the first to appear, and continued until the ninth year. As suddenly as it came it ceased, and somnambulism took its place. The patient would not always attempt to get out of bed, but would sometimes simply sit up, remaining quiet, with eyes wide open, or would automatically take down or put up her hair. Until her twelfth year she was affected in this way, when, for the time being, the tendency to sleep-walking left her, and for nearly a year nocturnal incontinence was the annoying symptom. When this ceased, she began again immediately to walk in her sleep, and had continued the habit with great frequency until I saw her.

She was not a resident of the city, and as it seemed impossible for her to remain for treatment at that time, I prescribed the bin-oxide of manganese for the menorrhagia, together with iron. Three months after, she came again, but reported no improvement, agreeing, however, to remain for a time and submit to such treatment as might be necessary.

Her anæmia and weak condition, and decided nervous state, seemed to me to indicate general faradization, and, stopping all medication, I began this form of treatment. Up to this time she had been more or less somnambulistic every night for many months. During the first six days of treatment her symptoms were as usual. The seventh night she slept throughout the night quietly. On this occasion the application was given at her home and just before retiring, the others having been administered during the day and at my office.

Influenced by this suggestive result, I administered subsequent treatment in her own room and at bedtime, with most satisfactory results.

During the succeeding two weeks she arose from her bed but twice, and as the lateness of the hour was exceedingly inconvenient for me, I returned to the morning applications. Singularly enough, the patient was disturbed in her sleep three times in the course of the subsequent week, causing me to once more resume the night treatment, not to be again changed until the cessation of all treatment.

The menstruation which now appeared was far less profuse and entirely painless. During the four following weeks that she remained under treatment she showed evidences of somnambulism but twice, and at the end of that time there was manifest improvement in health and strength.

Six months after the cessation of treatment by general faradization, and within a few weeks, the patient called upon me, reporting that the habit seemed to be permanently broken, as in no instance had she arisen in her sleep. Her menstruation had continued normal in every respect, and her health was in every way excellent.

Not to burden this paper with further long clinical recitals I will simply say that, out of five other cases of similar character, three responded admirably to treatment, which to my mind clearly illustrates the constitutional character of the nervous derangement as well as the utility of the treatment adopted.

The pathological condition prevailing during the somnambulistic state can in the nature of things only be conjectural. As before remarked, many things point to a disturbed circulatory equilibrium, probably arterial contraction with anæmia over large areas of the brain, associated with some definite localization of arterial activity. The rationale of electrization is, that by one method of its application—central galvanization—the central nervous system is directly brought under its influence. It is, of course, impossible to exclusively localize the galvanic current in any special portion of the brain-structure, or

the pneumogastric or sympathetic, and even if it were possible, it would be just as impossible to know where to localize it, for in very many so-called functional diseases there is no well-defined local pathological state, the whole central nervous system rather being invaded by a condition of exhaustion and irritability.

By judiciously influencing the entire nervous system with the galvanic current its nutrition may be wonderfully improved, and to this improvement in nutrition, brought about by the tonic and sedative action of the current, is due the many excellent results that follow its application, not only in sleep disorders, but in hysteria, neuralgia, chorea, and many other conditions. By the other method (general faradization), although the brain and cord may not to any great extent be brought directly under the influence of the current, yet we are warranted in believing that the powerful action of the current upon the superficial sensory and motor nerves exerts a decided reflex effect even upon remote nerve-centres. General faradization is to the whole body what localized faradization is to an individual part or organ. From localized applications we obtain certain physical, mechanical, chemical, and physiological effects. These effects resulting in localized increase of the processes of waste and repair, and improvement in nutrition, are, through general faradization, followed by the same results, with the difference that they are appreciated by every part of the system, instead of a certain restricted portion.

Clinical Department.

SYPHILIS FROM VACCINATION.

Dr. J. S. Prettyman, Jr., of Milford, Del., reports the following case: "Mr. N. T——, aged thirty, has been married nine years. His wife is healthy, has never aborted, and is entirely free from skin disease. They have two robust children, aged six and eight, who have always been well, but are subject to 'a breaking out.' Ten years ago the patient vaccinated himself directly from the arm of another, who, it was said, had been cured of a 'bad disorder.' In about two weeks an eruption appeared over the entire body and continued three months, disappearing and reappearing several times since. From time to time lumps have been noticed over various parts of the body. He has never had ulcers in the throat, but the glands have been enlarged, and several times chronic abscesses have formed. He received no treatment except such remedies as he would apply locally. He came to my office, October 13th, with nodes, bullous syphiloderm, and ulcerations upon the neck, arms, back, and legs. He denied all possibility of contagion from any other source, and affirmed that previous to the vaccination and appearance of the eruption he had not even once indulged in sexual intercourse."

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

Dr. E. A. Lewis, of Brooklyn, writes: "Several weeks ago a strong, healthy mechanic, about thirty years of age, applied to me for relief, saying that a piece of meat was stuck in his gullet. He could take one swallow of water and retain it. Two swallows he held with difficulty. Three swallows were instantly regurgitated, and sometimes regurgitation (not vomiting) followed the taking of two swallows of any fluid. He said he was hungry and thirsty, and wanted to be relieved. I passed an œsophageal bougie into the stomach without meeting the slightest resistance, but the patient could not retain fluid any better after it. The regurgitation occurred as before. As he could not swallow, or rather retain, anything, of course I could not give him medicine of any kind by the mouth. I tried apomorphia, hoping to make him vomit, but it failed. I gave him an anodyne mixture, of which he was to take a few drops every half-hour. About two hours after leaving my office he felt something give way inside of him, as he said, and immediately proceeded to eat a hearty supper. He was perfectly well before and has been since. Was it spasm of the lower part of the œsophagus?"

A CASE OF COIN SWALLOWING.

Dr. J. L. Latta, of Millerton, Kan., writes: "I have just dismissed a case of coin swallowing similar to the one reported by Dr. Gardner. I report it as illustrating a somewhat different method of treatment. A child two years old swallowed a small copper coin, a cent of the modern type. An hour later the patient was brought to me, looking rather cool and unconcerned; but the parents were considerably alarmed, and desired that active purgatives might be given in order to get rid of the 'poison thing.' I calmed their fears and directed them to do nothing beyond feeding the child freely with coarse food, such as corn-bread with butter, and mush and milk, and allowing him the privilege of piecing freely between meals. Two days later the coin passed from the bowels, and was changed from a dingy brown to a bright metallic hue, as if fresh from the mint. There was not the slightest noticeable disturbance local or constitutional. This makes the fifth case of coin and button swallowing that has come under my observation; all have been treated in a similar way, and without any bad results following the somewhat ostrich-like diet."

ACCIDENTAL CURE OF HYDROCELE.

Dr. W. E. Satlee, of Monticello, Ky., relates the case of a man, forty-five years old, of regular habits and good family history, who received a severe blow on the testicle some five years ago. Orchitis resulted, and was followed by hydrocele after the inflammation had subsided. The writer tapped the sac a year ago, and injected tincture of iodine, but the fluid soon reaccumulated. In January last the operation was to be repeated, but was delayed until the patient should have returned from a journey which he was obliged to make on horseback. As he was on his way home his horse stumbled, throwing him against the pommel of the saddle. The scrotum was strongly compressed and the sac was ruptured. In the words of the patient: "It made me powerful sick for a time, and then my bag began to sweat and the water oozed out of it until one leg of my drawers was wet clean down to my foot." He was unable to continue his journey until the following day, in the afternoon of which he was examined by Dr. Satlee. At this time there was considerable ecchymosis, with tumefaction of the scrotum, but no orchitis. After the swelling had subsided the scrotum was normal in appearance, though the testicle on the affected side was slightly atrophied. There has been no return of the hydrocele since the fortunate accident occurred.

PAINFUL HYPERTROPHY OF THE BREAST DEPENDENT UPON UTERINE DISEASE.

Dr. L. N. Sharp, of Minneapolis, Minn., writes: "In November, 1882, I was consulted by a lady for a painful tumor of the left mamma. She had been cared for by several medical men in a city sixty miles distant. She came to me, by advice of friends, with the diagnosis of cancer, and said her attendants had advised amputation of the breast as her only chance for recovery, but she recoiled from such an alternative. I looked the case over. She was thirty years of age, the mother of three children. She was well-built and fleshy; digestion good. The left

breast was hypertrophied, the right one well developed, but only half the size of the left. The pain in the enlarged gland was excessive and constant, and the patient said she had not a good night's sleep for more than two years because of the painful condition. The trouble began about three years before, the breast gradually enlarging and becoming more painful. On inquiry I found she had uterine trouble, and I came to the conclusion that the hypertrophy was due to the uterine difficulty. I explained my views to her and suggested an examination of the uterus. She declined an examination, and I declined prescribing. She then went to a city one hundred and fifty miles distant to consult a 'cancer doctor,' who told her he had never seen anything like her case and dared not do anything for her. When she returned to her home she was advised again by her friends to place herself under my care, and after some time concluded to do so. On examination I found endo-cervicitis and erosion. She came under treatment in December, 1882, and as the uterus returned to its healthy condition the pain of the breast declined, the hypertrophy began to lessen, and by the following June the breast was about the size of its fellow and entirely free from pain."

ETHER SPRAY IN THE REDUCTION OF HERNIA.

Dr. Geo. R. Fellows, of Moose River, Me., writes: "About two years ago was called to see a case of strangulated hernia of two days' duration. Two physicians had been called, but were unable to reduce the hernia by ordinary means. The patient was suffering terribly, but was unable or unwilling to take opiates of any kind. Thinking to relieve the pain, I sprayed the hernia with ether, using a common hand-atomizer, and was greatly surprised to find the hernia disappearing spontaneously. Since that time I have used ether spray in strangulated hernia in several cases, always with the best results, the operation being painless, and reduction occurring spontaneously or with slight pressure."

Progress of Medical Science.

The Care of the Skin.—The *Southern California Practitioner* quotes Professor Auspitz, of Vienna, as follows: "1. A healthy integument is not necessarily beautiful. Even if all requirements concerning diet, residence, atmospheric and climatic conditions, etc., are carried out, the complexion is often extremely bad. The general condition of health has no influence upon the beauty of the complexion, though it has upon the health of the skin. 2. Cleanliness is a *sine qua non* of the beauty of the complexion, though it does not play a great part in the health of the skin. 3. Water is serviceable to the skin in only moderate amounts and at moderate temperature. Very cold or warm baths, when used to excess, diminish the elasticity of the skin and its power of resistance to external irritants. 4. Distilled and so called soft waters are more suitable for washing, and less irritating than hard water. 5. The hard soda soaps are usually preferable to the soft potash soaps for toilet purposes. The quality of soaps depends upon the quality of their constituents and the thoroughness of their saponification. Good soaps must not contain free alkali, or any foreign irritating substance. The addition of moderate quantities of perfume does not materially change the quality. 6. Simple, finely ground powders, such as starch, magnesia, etc., are entirely innocuous, and often act as a useful protection against external irritants. 7. Frequent application of alcohol abstracts the water of the skin, makes it dry and brittle, and impairs its nutrition. This is also true of glycerine. All toilet washes containing alcohol to any considerable extent should be avoided. 8. This is true to a still greater extent of other additions to washes, such as corrosive sublimate, mineral acids, certain metallic salts, etc. 9. Camphor acts merely as a bleaching powder. This is also true of benzoic resin, sulphur flowers, and substances containing tannic acid. 10. The use of sweet-smelling oils and fats should be employed to a greater extent than is now done for toilet purposes. 11. This is particularly true with regard to the growth of the hair. The nutrition of the scalp should be increased by the rational application of fat (for example in the form of oil baths by means of the application at night of a sponge soaked in oil upon the scalp), and the greater use of simple pomades. These should be applied to the roots of the hair rather than the shafts. 12. Substances should be avoided, or sparingly used, which abstract water from the skin and the roots of the hair."

Spontaneous Cure of an Ovarian Tumor.—The following curious case of spontaneous cure of a large cystic tumor of the ovary is reported in the *Hospital Gazette* for September 11, 1886: "A woman, aged twenty-nine years, was admitted to the Mater Misericordiæ Hospital, in May, suffering from ovarian tumor, which caused her great inconvenience and was undermining her health for some months past. She had been married two years, but had no family. Three months ago she consulted Dr. Duke, of Steeven's Hospital, Dublin, for a swelling over the right ovary. It was excessively tender and painful, and gradually increased in size until it extended over the abdomen. She was taken into the hospital, and seen by Dr. More Madden, Obstetrical Physician, who considered the case one for immediate operation, in consequence of the delicate state to which the woman was reduced in a short period, and the intense degree of pain caused by the tumor. A few days after her admission, the patient was seen in consultation by four physicians, all of whom agreed that the case was one for ovariotomy—the diagnosis being a thin walled, globular, well-marked, unilocular ovarian tumor. The abdomen then measured forty-three and a half inches in girth. Being close on the menstrual period, it was decided not to operate until this should have passed, and it was accordingly postponed until the 15th of June, tonics being administered to get up the woman's strength. She was up and going about the ward, but on the 9th of June she took to bed, complaining of intense abdominal pain. After some hours the pain was followed by incessant diarrhœa and profuse diuresis, which lasted four days. At the expiration of this period the abdomen was found to have considerably decreased, and no trace of the tumor was discernible. The patient was again seen in consultation by the same physicians. All agreed and concurred that the cyst had been spontaneously ruptured, and the effusion of the ovary fluid into the peritoneal cavity, its absorption thence and evacuation by the bowels and kidneys. After this the patient gradually improved. An examination was made on the 16th of June. Some fluid was still discernible in the peritoneal cavity, but the abdominal pain and soreness were greatly reduced. To relieve the pain and help the absorption an ointment made up of extract of belladonna and unguent hydrargyri was rubbed over the abdomen, and a mixture of iodide of potash given, which she had been taking some time previously. The patient remained in bed about fourteen days, recovering both health and strength. The abdominal swelling had gone down to twenty-nine inches. The woman finally left the hospital on the 15th of July, and was again seen after a week, when she was in excellent health and spirits, being about to take a journey to the country."

Eulyptol is the name given by Schwetz to a combination of salicylic acid and eucalyptus, for which peculiarly valuable antiseptic properties are claimed.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CONSUMPTION OF FOWLS AS A CAUSE OF PHTHISIS.

IT has been established on very good evidence that tuberculosis can be communicated to certain of the lower animals by direct inoculation, by food, and by inhalation of tuberculous matter. There is a considerable amount of clinical evidence showing that man may be infected with tuberculosis by inhaling the breath and exhalations of phthisical patients. Some facts apparently show also that phthisis may be communicated to man, or rather to infants, by tuberculous milk. We do not regard this point as clearly demonstrated, however, and the announcement recently made by Dr. de Lamailerée, in the *Gazette Médicale de Paris*, that the flesh of tuberculous fowls will cause consumption, must be accepted with much reserve. Dr. de Lamailerée bases his opinion upon the following occurrences, which are of so interesting a character that we give a description of them in full. He says:

"The little village of C—— is a most healthy spot, being about two thousand feet above the level of the sea. Epidemics are there unknown, and the inhabitants of this village generally die of old age or pneumonia. In 1872 a young man, who had contracted bronchitis while a prisoner in Germany during the war, settled down in this village. He married a strong, healthy girl; soon afterward he began to spit blood, and died of consumption two months after the birth of a son, and within a year of his marriage. Soon after his death his wife, who had nursed him, had bronchitis, which became chronic, and in a little while tuberculosis of the lungs was manifested. The child had successive attacks of bronchitis and rapidly developed consumption. Cavities formed in the woman's lungs, and she expectorated abundantly. A short time ago the physician attending her was called to a young woman in the same village who showed evident signs of pulmonary phthisis. The house was at some distance from that of the first female patient. The second patient was a woman, twenty-nine years of age, and of a robust constitution. A careful examination revealed that she rarely went to the house of her neighbor who had contracted consumption, and never ate nor slept there, but that she had eaten the flesh of eleven fowls which had died at her invalid neighbor's during the space of four months. She had eaten them very underdone, believing that they were most nourishing when but slightly cooked. It was discovered that these fowls had swallowed some of the sputa expectorated by the first patient. The birds had been seen to collect round her whenever she coughed. On making a necropsy of one of the fowls which had just died, it was found that the intestines and liver were filled with tubercles. The fowl had become very emaciated, and could hardly move; the purulent liquid found in the tubercles contained in the liver was filled with bacilli tuberculosis. It was probable that the other birds had perished from the same cause. These fowls must, therefore," says Dr. de Lemailerée, "have been the means of conveying contagion to the second woman who had eaten them. In this case there is the triple contagion of tuberculosis: First, from man to man; second, from men to animals; third, from animals to men."

It will be seen, however, that there are two very weak points in this argument. First, it is not shown that the patient did not have phthisis before she ate the fowls; and, second, it is not proved that the particular fowls she ate were tuberculous.

LUDWIG'S ANGINA—INFECTIOUS SUBMAXILLARY CELLULITIS.

LUDWIG'S angina, or infectious submaxillary angina, is a disease little heard of at the present time, and not mentioned at all in ordinary text-books. It seems to have been comparatively frequent, however, in some parts of Europe forty years ago, and even to have appeared in epidemic form. It was believed by Professor Ludwig, of Würtemberg, who first described the disease, to be a specific and separate morbid entity. Some of the later writers have, however, denied this, and claimed that it was only a severe cellulitis of the submaxillary region, having peculiar characters, on account of the anatomical arrangement of the parts affected. Ludwig's view, however, is still in the main sustained, although not every case of submaxillary cellulitis, even when severe, is Ludwig's angina.

A very elaborate review of this whole question, together with a report of two cases, has recently been made in *Le Progrès Médical*, 1886, Nos. 35, 36, 37, 38, by Dr. Paul Tissier. As defined by this author the disease is an infectious process of a specific and septic character, secondary to a lesion in the buccal cavity, by which the pathogenic germ enters the submaxillary tissues. It is characterized by a very acute inflammation of the tissue beneath the chin and above the hyoid bone. This inflammation tends to suppuration, and even gangrene, and it is accompanied with very severe constitutional symptoms. The disease is a grave one, a considerable portion of the patients dying.

The disease attacks persons of from twenty-five to thirty years of age, and seems to be brought on by frequent exposures to cold. After a few days of prodromal symptoms the neck begins to swell and become painful. By the fourth day the condition is one of seriousness and suffering. The tongue is swollen and immovable, there is great salivation, the buccal mucous membrane is reddened, the neck is swollen so that the mouth can hardly be opened, and the line of the chin is obliterated. The swelling may increase and press upon the trachea, so as to cause great dyspnœa. The temperature continues

high, without great oscillations. Finally, at the end of the week, suppuration or gangrene usually takes place.

The features of the disease are so marked that it cannot easily be mistaken. Still, as submaxillary phlegmons do not rarely occur after infectious fevers or from periostitis of the lower jaw, a distinction is not always to be made at first sight. Some cases have been reported as Ludwig's angina which, apparently, were not the real d sease.

THE MEDICAL REGISTER AND THE COUNTY SOCIETY.

THE editors of "The Medical Register," of New York, New Jersey, and Connecticut, continue to refuse to publish as physicians, the names of several gentlemen who are members of the New York County Medical Society. That is an injustice to the members in question, and a direct impertinence to the County Society. We admire and commend the general spirit of conservatism shown in editing "The Register," but conservatism is a very different thing from the unreasonable procrusteanism of self-righteous jurisdiction. The Medico-Historical Association should remember that there is not only a Past, but a Present and a Future—particularly a future.

FURTHER CONTRIBUTIONS TO THE TREATMENT OF PHTHISIS.

WE have already referred to the ingenious device of a Frenchman, by which he proposes to treat and cure phthisis through the agency of rectal injections of sulphurous gas. Two other methods of combating this dread disease have recently been suggested. M. Seiler, of Paris, has been using inhalations of fluoric acid, a substance which, if we mistake not, has recently been recommended also in the treatment of diphtheria. The method is as follows: A mixture is made of water, 150 grammes; acid hydrofluoric, 50 grammes. This is sprayed into the air of a room, so that the atmosphere to be breathed contains about ten litres of the vapor to one cubic metre. The patient sits in the room and breathes this medicated air for an hour daily for twenty, thirty, or more days.

The results obtained are those usually recorded of all new treatments for phthisis, viz.: First, oppression and dyspnœa disappeared after from one to ten séances; second the sharpness of the cough was lessened; third, nocturnal sweats disappeared after from six to fifteen séances; fourth, sleep was restored, the appetite improved, expectoration modified, and the weight increased.

M. le Docteur Roussel, of Paris, has a method for which much more than the above results are claimed. He has noted twenty cases of phthisis, in whom, while under his treatment, the bacilli tuberculosis gradually disappeared from the sputa. The time occupied in accomplishing this varied from two to three and a half months. Meanwhile all the symptoms became correspondingly ameliorated. The method by which he obtained these results consists simply in the hypodermatic injection of eucalyptol. That this may be done effectively and without pain, however, M. Roussel submits the eucalyptol to a certain somewhat mysterious process of "aging," by which a certain bitter and acrid resin is removed. During the first week he makes a daily injection of from three to five minims. The dose is then gradually increased up to twelve minims. M. Roussel describes the *modus operandi* of his cures in a way that shows him to be doubtless a very accomplished quack, although considerable space is devoted to his method in the columns of the *Lyon Médical.*

VITAPATHY.

THERE exisis in this country a peculiar system of healing called vitapathy, which has a college, an annual National Convention, and a number of professed followers. Vitapathy is a mixture of mesmerism, medicine, and religion, or of what pretends to be such, and its more advanced followers call themselves ministers, and even solemnize marriages.

The system was gradually evolved by one Dr. John Bunyan Campbell, a person who describes himself as having been successively a regular physician, an eclectic, a homœopath, a hydropath, and a mesmerist. Out of his experiences there finally blossomed the perfect flower of "vitapathy."

The vitapathic system is a compound especially adapted for quacks to make use of, and naturally some of its followers represent the topmost feather of charlatanry. Some of the disciples are, however, no doubt perfectly sincere in their belief in the potency of their methods. These consist in certain vitalizing processes, very nearly equivalent to the ancient practice of wearing charms and amulets. For example, to cure epilepsy the vitapath writes backward the words, "It is done," on a piece of paper, which the patient wears around his neck. In fact, to cure any disease, one has only to write the name of the disease on a piece of paper, also telling it to depart—for instance, "Dropsy, depart"—and have the patient wear the paper next his kidneys in dropsy, or any part of the body afflicted with any disease. Of course, the main thing is to have the paper well magnetized for the person and purpose intended.

All medicines are discarded. One remedy for whiskey-drinkers is somewhat novel. It consists in directing the patient to put into a jug, or (in Kentucky) a keg, all the amount one generally drinks in two months; "then," says Dr. Campbell, "when you take a portion out for a drink, put in its place as much water, and do so every time you drink, and thus keep in the jug the same amount of liquid. Take out the same size drink each time, and every drink will become weaker and weaker, until you get down to clear water, then you will be effectually cured."

It can easily be seen that vitapathy is only another of the manifestations of these mesmeric cures, mind-cures, and "Christian" science, so called. These systems, we believe, as a whole, do serious harm to the public health. They work upon the fancies of the sensitive, they mislead, deceive, and pervert. Persons who have been through these vitapathic, or faith-cures, cannot fail to be somewhat injured mentally by the process. They promote hysteria, hypochondriasis, and enfeeblement of the will, with all the personal and domestic perturbations that follow. Among a nervous, over-sensitive people, like the Americans, especial harm is done, and it would

be wise public policy to put some strict limitation upon the practice of all these various forms of mental therapeutics. Along with other reforms there might well be established "A Society for the Total Abolition of Vitapathy, Faith-cures, Mind-cures, Mesmeric Shows, and 'Christian' Science."

A MISREPRESENTATION OF AMERICAN DOCTORS.

THE American medical profession would be glad to know something about one Dr. Pohlmann, of Buffalo, America. He appeared as a representative of our profession, and the International Medical Congress, at the meeting of the German Congress of Naturalists and Physicians, in September last, and made a speech of a somewhat extraordinary character. The object of his remarks appears to have been, first, to apologize for the medical profession of America, and next, to urge the members of the German Congress to come over to this country next year. After setting forth his credentials as a delegate, Dr. Pohlmann says that "already for a long time German science has occupied the first place in America!" He then goes on to admit, and apologize for the fact, that Americans are "too practical. We are," he says, "a heterogeneous people, where God is for us all, but each one is for himself, and the devil takes the hindermost. Naturally," he adds, "it happens that ideals cannot take root in America." For all this, Dr. Pohlmann assures his audience that the Americans desire some ideals, and one of them is to organize a successful international congress. He then pictures, with much fervor, the welcome which the American profession will give all German physicians who come over to the congress next year.

No doubt Dr. Pohlmann's position was a delicate and difficult one; but we hardly think he acquitted himself with distinguished credit. We doubt whether American physicians have any fewer ideals than do their brethren across the water. They are actuated by as warm sympathies, and stimulated by as lofty impulses as any class of professional men anywhere. Selfishness is a universal quality, but it is far less a characteristic of Americans than of Germans, and it is most unfortunate that so unjust a presentation of American character should have been presented to a great body of intelligent foreigners.

It is not to be wondered at that, in replying to Dr. Pohlmann, the president, Professor Virchow, said very distinctly that the Washington Congress could expect very little of Germany as long as it was understood that differences still existed regarding its management.

SKEPTICISM IN MEDICINE.

DURING the past year our columns have contained frequent communications concerning the amount of actual effect we are able to exert by our remedies upon disease. The question has repeatedly been asked, "What can we cure?" Our fathers believed in the positive effects of drugs. They administered them with a lavish hand. We have swung over to an opposite extreme, and, outside of our few specifics, mutually acknowledge our inability to affect many morbid processes. We are skeptical in regard to the effect of our remedies.

Some very striking remarks were recently made upon this topic by Dr. Malcolm Morris, in an address delivered before St. Mary's Hospital. He rightly characterizes the age as one of "tumultuous mental activity." All things are changing. People become accustomed to instability rather than to its opposite, as has heretofore been the case. Young men entering the medical profession are especially affected by the spirit of the times. In its application to our present topic they see remedies brought forward, vaunted as specifics, and speedily forgotten. They are led to disbelieve in the permanency of any drug. "Skepticism," says Dr. Morris, "has infested medicine as much as religion. Where, to-day, is the implicit faith in drugs which was a dogma of the healing art in the past? . . . The extreme skeptic boldly disavows his faith in the potency of any drug whatever. Others, less dogmatic, content themselves with acknowledging the value of a drug or two. The position is alarming where skepticism, wrapped in its own self-confidence, once and for all, repudiates all aids and accessories. Briefly, it states its deliberate opinion that disease is infinitely better left to itself. The natural physiological energy of the body is the prime element in the healing process. This is neither more nor less than modern fatalism—waiting on events. Such a doctrine, if successful, would be fatal to medicine."

Such a condition of affairs is, indeed, unfortunate. It is not, however, greatly to be wondered at. It illustrates, in a general way, the unrest of the age. Furthermore, there are special reasons for its existence. The discovery, ever widening, that many common diseases are self-limited, vitiates the boasted curative agency of remedies. The study of pathology shows us how widely of the mark we have often aimed. We know that topical applications, where possible, can modify disease; but on the various visceral lesions we are able to exert very little direct effect.

It is a matter of common observation that the older a physician grows, the less remedies he generally uses. He does not by any means diminish his therapeutic resources. Rather he enlarges them by the discovery of wider application of old agencies. Is it not possible, nay, more probable, that the skill of many a physician, popularly supposed to be a genius, lies not in a surrender to the prevailing tendency to skepticism regarding remedies, but rather in a wise determination to make the most possible of even the limited resources at his command.

BRIGHT'S DISEASE AND THE URINARY FERMENTS.

IT is a fact not generally stated in text-books, but one which is well established by the experiments of Grützner, Sahli, Gehrig, and others, that normal urine always contains pepsin and trypsin. The peptic ferment acts in an acid, the tryptic in an alkaline, medium. Drs. G. Nuja and S. Belfanti have contributed some interesting observations with regard to the relations of these urinary ferments to Bright's disease.

The urine of patients suffering from many different diseases, such as typhoid fever, pneumonia, erysipelas, and even severe gastric affections, such as cancer of the

pylorus, was examined, but in all cases the presence of the ferments was established. On the other hand, in twenty-eight cases of Bright's disease (four acute and twenty-four chronic) the *trypsin* ferment was always absent from the urine. The peptic ferment was, as a rule, present. To the suggestion that this is accounted for by the presence of the albumin in the urine, the authors answer, that in physiological or in febrile albuminuria the trypsin is always present, while in true Bright's disease it is always absent. The trypsin is also absent in interstitial nephritis when the albumin is very small in amount, as well as in parenchymatous forms, in which it exists in large quantity.

The separation of the trypsin, therefore, by the kidneys, depends upon the healthy action of these organs.

In this connection it is worth while noting the fact that Dr. E. Holovtschiner has discovered (*Virchow's Archivs*, Bd. civ., Hft. 1) that the urine contains ptyalin, or the starch-ferment, and also a milk-curdling ferment.

News of the Week.

An Expensive Experiment.—In the early days of cocaine investigation its toxic power was tested on a dog, and forty grammes were required to kill the animal. The cost was eight hundred marks, or about one hundred and sixty dollars.

The Medical Advantages of Vienna now lie mainly in the departments of dermatology, laryngology, and venereal diseases, says a correspondent of the *Cleveland Medical Gazette*. The two leading men in the second branch named, Schnitzler and Schrötter, have only four vowels between them, to make up for which there is a regular inebriism of consonants.

Professor Braun, of Vienna, is old and very corpulent, and has passed the zenith of his glory. His gynecological lectures are sometimes interesting, but, as a rule, are not so.—*Cor. Cleveland Medical Gazette.*

Is there a Ring in the Connecticut State Medical Society?—One of the members of the society, Dr. Hubbard, has issued a circular saying that there is a "ring" which controls the Connecticut State Medical Society, but the *N. E. Medical Monthly* vehemently denies it.

Thomsen's Disease.—There has been considerable interest excited in neurological circles over the discovery of a case of Thomsen's disease, it being believed to be the first observed in this country. The patient was exhibited before the New York Neurological Society by Dr. George W. Jacoby, at its last meeting.

Ovariotomy by Young Beginners.—The operation for ovariotomy has twice been performed by the members of the house-staff of Bellevue Hospital, with the permission and under direction of the visiting physician. One patient recovered and one died, the latter being a very unpromising case.

The French Surgical Congress has recently concluded its second annual meeting. The presiding officer was M. Ollier. The subject of the first day's meeting was the after-effects of extirpation of the thyroid. M. Reverdin reported five cases of cachexia strumpsiva among eleven cases in which the gland had been totally removed. On the second day M. Vaslin read a paper on tetanus, maintaining that it was a neurosis to be treated by isolation and chloral "to saturation;" while M. Balestreri denied the efficacy of chloral and advocated the use of tartar emetic, giving gr. iij. to gr. v. daily. Most of the speakers believed in the infective and parasitic nature of tetanus.

A Religious Journal Endorsing an Obscene Book.—If the representations of the *Weekly Medical Review* are correct, and we have no reason to doubt them, the *St. Louis Evangelist* is a religious journal edited by a very weak-minded or very hypocritical person. The said journal has been recommending and endorsing a quasi-medical book which gives directions for preventing conception, facilitating pleasurable intercourse, and other details of a disgusting character.

A Maternity Home for Respectable Unmarried Women.—We have received from out-of-town physicians copies of a circular announcing the organization of a "Maternity Home." This "Home" is under the direction of a doctor whose name is not, we believe, in the "Medical Register," but is on the lists of the County Medical Society. His "Home" is for the care of "respectable" unmarried women who are about to become mothers of illegitimate children. The circular announces that such persons can have their cases attended to privately, and, if desired, the child, when born, will be removed, so as to give the mother no further trouble. It is attempted to impart an air of respectability to the "Home" by stating that the "staff" are members of the County Medical Society, and are connected with some of the city colleges and public institutions. A painful feature of the case is that so large a number of the circulars have apparently been sent to Philadelphia. This conveys an imputation upon the moral status of that good city which we feel sure is unjust. The "Maternity Home" is an institution with which respectable medical men cannot associate themselves, and the manner in which it is advertised is to the last degree revolting. There need be no fear but that the County Medical Society will do its duty in connection with the matter.

Dr. Samuel Sexton, at the invitation of the Philadelphia County Medical Society, attended its meeting last Wednesday, and opened the discussion of Dr. Burnett's paper on "Otorrhœa and its Treatment."

Fatal Result from the Use of Peroxide of Hydrogen.—Dr. Laache, of Christiana, reports the case of a man suffering from emphysema, to whom hypodermatic injections of a three per cent. solution of peroxide of hydrogen were given. After the seventh injection the patient showed signs of heart-failure, and died in ten minutes.

Paralytic Ataxia of the Heart is the name given by Professor Sammola to a cardiac neurosis which comes on at the age of forty to sixty, as the result of emotional strain and venereal excesses. It is characterized, first, by severe dyspeptic troubles, then by cardiac symptoms, palpitations, and irregular heart action, marbled extremities, dyspnœa, and slight œdema.

THE COUNTY MEDICAL SOCIETIES OF NEW YORK *versus* THE DISTRICT BRANCH ASSOCIATIONS.—At the annual meeting of the Fifth District Branch of the New York State Medical Association, the President, Dr. Porteous, compared the working of the District Branches and the County Societies. He said "he had recently seen a statement by one of the censors of the Medical Association of Alabama, that the County Medical Societies of that State have a good deal of important work to do, and they do it. Most of the County Societies in this State had a good deal of work to do, and did *not* do it. In perhaps a majority the meetings were annual or semi-annual, the attendance small, and the principal business the all-important one of electing officers. For years it had been only a form, and so much had this been felt by the more active members of the profession that in some parts of the State three or more counties would form an independent association, in which very good work was done. He said independent, because the State Society would not recognize them. But the District Branch Associations were still better—better organized, and, with a common head, working more harmoniously and efficiently." If all this is true the County Medical Societies of the State had better look after their work a little more closely.

THE MEMPHIS CITY HOSPITAL is a very poorly conducted institution, according to the *Mississippi Valley Medical Monthly*. The mortality rate is high (nearly fourteen per cent.); the wards are not well built, and are not kept in a cleanly condition. The cause is want of money.

THE TRI-STATE MEDICAL SOCIETY meets in Memphis on November 10th and 11th.

CONTROLLING CONTAGIOUS DISEASES WITH COTTON.—By the use of cotton filters and respirators Dr. David Prince, of Jacksonville, Ill., proposes to keep the infectious germs from spreading out of an infected room and from entering the system of persons exposed. Cotton filters arrest the passage of all particulate matter.

OUR EXPENSIVE CITY GOVERNMENT.—The average cost of food per capita annually in prisons and asylums is generally from $35.51 to $47.12; that for working-men, $47.67. To support, however, the 14,000 persons in the care of the Commissioners of Charities and Correction of this city it costs $1,500,000, or over $100 per capita, annually.

A NEW METHOD OF LIMITING THE SPREAD OF CONSUMPTION was proposed at the recent meeting of the American Public Health Association. It consists in popularizing and making uniform the practice of disinfecting the sputa of all phthisical patients. They would be expected to cough upon aseptic rags and expectorate only in disinfected receptacles.

THE USE OF NITROGLYCERINE by physicians should be attended with some special care. The drug may be old and inert, or, on the other hand, the alcohol which holds it in solution may evaporate and leave the solution dangerously strong.

THE NEW YORK ACADEMY OF MEDICINE has had another stroke of good fortune in the gift by Mrs. Woerishoffer of $25,000. This, with previous gifts and legacies, brings the funds of the Academy close up to $200,000, and will enable it soon to begin the erection of a suitable building, as well as to make other needed additions to its equipment.

CARLYLE ON THE MEDICAL PROFESSION.—In a letter written to Dr. Hutchinson Stirling in 1842, and but recently published, Carlyle said of the medical calling: "What profession is there equal in true nobleness to medicine? He that can abolish pain, relieve his fellow-mortal from sickness, he is indisputably usefullest of all men. Him savage and civilized will honor. He is in the right, be in the wrong who may. As a Lord Chancellor, under one's horse-hair wig, there might be misgivings; still more, perhaps, as a Lord Primate, under one's cauliflower; but if I could heal diseases I should say to all men and angels, without fear, 'En! ecce!'" Carlyle also gives some good advice on the subject of writing *versus* working. He counsels his correspondent, Dr. Stirling, then a young man, to "learn the indispensable significance of hard, stern, long-continued labor," and of silence. "Be in no haste to speak yourself," he says. "Why be *porous*—incontinent? Nothing can ferment itself to clearness in a *colander*." Avoid literature, he continues, which, as a trade, is the "frightfullest, fatallest, and too generally despicablest of all trades now followed under the sun."

THE LATE PROFESSOR PANUM, the distinguished Danish physiologist, died, in his sixty-fourth year, from thrombosis of the coronary artery, consequent fatty degeneration, softening and finally rupture of the ventricular wall. He died literally of a "broken heart."

A FREE HOSPITAL FOR CHILDREN, costing $300,000, has recently been erected in the upper part of the city, and placed in charge of homœopathic surgeons (!) and physicians. No doubt we shall be freely charged with maliciousness and envy in saying that the placing of serious cases of illness in care of genuine homœopaths is little less than a crime. This is our very unbiassed opinion, however, which, if the homœopathic physicians in question are, as is the rule, men who use a little homœopathy and a great deal of ordinary medicine, then it is a case of misrepresentation, not to say humbug.

AT THE ANNUAL MEETING OF THE AMERICAN RHINOLOGICAL ASSOCIATION, held at St. Louis, October 5th, 6th, and 7th, the following officers were elected: J. A. Stuckey, M.D., of Lexington, Ky., President; Carl H. von Klein, M.D., of Dayton, O., First Vice-President; Theodore North, M.D., of Keokuk, Ia., Second Vice-President. The Association adjourned, to meet on the last Tuesday in September, 1887, at Dayton, O.

SUCCESSFUL BRAIN-SURGERY.—Mr. Victor Horsley has now operated upon four patients for removal of brain-tumors. In all four cases the patients survived and were improved.

DR. DE CHAUTEMPS calculates that M. Pasteur has saved the lives of one hundred and forty-five of his countrymen

IODIZED HYDROGEN-WATER.—Dr. J. Mortimer Granville, who is *facile princeps* in the devising of new, ingenious, and sometimes fantastic therapeutical methods, recently recommends, in *The Lancet*, iodized hydrogen-water for use in the uric-acid diathesis. He suggests the use as a drinking-water of distilled water to which a minute quantity of iodine or hydriodic acid is added; a current of hydrogen-gas is then passed through the mixture. The theory is that this water is a better solvent of excrementitious matters.

NICKEL-PLATED COOKING-VESSELS.—An order has been issued in Lower Austria forbidding manufacturers and tradesmen to sell nickel-plated vessels for cooking. It is stated that vinegar and other substances dissolve nickel; and that this, in doses of the seventh of a grain, produces vomiting, and is generally more poisonous than copper.

IN THE DIAGNOSIS OF CANCER OF THE STOMACH the presence of enlarged supraclavicular lymphatic glands is a factor of value, according to M. Troisier. These glands may also be enlarged in cancer of the lung, pleura, or œsophagus.

AN ATTEMPT TO SECURE REFORM IN THE MATTER OF MEDICAL-EXPERT TESTIMONY was made at the recent annual meeting of the Belgian Medical Federation. M. Poirier, of Ghent, moved "That it is desirable that instruction in forensic medicine in the universities should not be theoretical, but practical, and that a higher degree of importance should be attached to this branch of the art of healing in examinations; also, that a special and thorough examination, comprising *vivâ voce*, written, and practical tests, should be instituted, which would confer the title of 'medical jurist;' that the courts of law should, as far as possible, be compelled to have recourse to practitioners possessing this qualification, and that a superior council should be formed for the purpose of verifying the various reports addressed to the courts and judging of the capacity of the 'medical jurists.'"

A SECOND CASE OF FATAL POISONING BY IODIDE OF POTASSIUM has recently been reported by Dr. Wolf, of Goritz—the patient, a man who was suffering from subacute kidney disease and cardiac hypertrophy. The dose taken was only about thirty grains in thirty-six hours, and the effect is considered to be the result of an idiosyncrasy.

MEMORIAL NOTICE OF DR. W. H. DUDLEY FROM THE COUNCIL AND COLLEGE FACULTY OF THE LONG ISLAND COLLEGE HOSPITAL.—The sudden and unlooked-for death of Dr. William H. Dudley, President of the Collegiate Department of the Long Island College Hospital, has taken from it its earliest and life-long friend. Associated with its inception and intimate with its various struggles, he lived to see it take rank with the foremost medical colleges of the land. It falls to few men to project a great educational institution, watch its sure and steady development, and in the ripeness of years to look with just pride upon its assured influence in the community. Yet this was Dr. Dudley's labor and his reward. Committed to a principle in medical education and convinced of the feasibility of its practical application, he had a comprehensive grasp of the means to be used, and devoted himself assiduously to the result. Intimately acquainted with the working of the various departments of the institution, he became the constructor of the general scheme, during all his life he was constantly observant of its work. From the choice of associates in the conduct of the College Hospital and Dispensary to the last details of the routine work, in each he was watchful, earnest, and untiring. A common sympathy with the institution was the open door to his enthusiasm and regard. And he lived to the fulfilment of his hopes and the appreciation that his labors were rewarded by success. Measured by the spirit and the work of kindred colleges, he lived to see the Long Island College Hospital the peer of any. He lived to see its cardinal principle adopted as the correct idea in medical education. He died as few pass away, in the fulness of years, with his life-work complete. His associates in the Council and the College Faculty unite in this testimony of regard for his faithfulness to principle, his purity of motives, and his heroism in endurance, and offer this tribute of admiration over his well-spent and honorable life.

J. W. HYDE, M.D.,
A. HUTCHINS, M.D.,
Of Council.

J. S. WIGHT, M.D.,
J. A. MCCORKLE, M.D.,
Of Faculty.

Reviews and Notices.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK FOR THE YEAR 1886. Published by the Society.

THIS annual does not materially differ from its predecessors in general make-up. Its typographical appearance, accuracy, and fulness of detail leave little to be desired.

ANNUAL REPORT OF THE ADJUTANT-GENERAL OF THE STATE OF NEW YORK FOR THE YEAR 1886.

THE only article of professional interest in this volume is the report of the Surgeon-General, Dr. Joseph W. Bryant. This deals especially with the general hygienic condition of the State Camp at Peekskill, and contains many valuable suggestions. Some of the evils mentioned need immediate attention, or the health of the troops occupying the camp next year will be exposed to considerable risk.

CRIMINAL REPORT OF HEALTH COMMISSIONER OF ST. LOUIS, 1885–86. John D. Stevenson.

A MOST complete publication, which would serve as an excellent model for our own local officials.

HOW WE TREAT WOUNDS TO-DAY. By ROBERT T. MORRIS, M.D. Pp. 165. G. P. Putnam's Sons.

THIS is the second edition of Dr. Morris' manual, which has been very freely criticized. Its subject-matter contains nothing especially new, but is full and accurate. The author's description of the antiseptic details of an operation is most commendable. His epigrammatic style is at times unpleasant, but yet enables him to make his statements clear and forcible. A surgeon away from the centres of professional activity can, by the perusal of these pages, easily place himself abreast of the times as regards knowledge about the antiseptic treatment of wounds.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. Illustrated by chromolithographs and fine wood-engravings. Edited by Albert H. Buck, M.D. Vol. III., FAC to HYS. New York: William Wood & Co. 1886.

The third volume of this great work embraces all the subjects arranged under the letters F, G, and H. Some of the larger articles are those on Face, Fever, Fœtus, Fractures, Gonorrhœa, Gout, Hand, Health Resorts, Heart, Hernia, Histological Technique, Hospitals, and Hygiene. In addition to these there are between three hundred and fifty and four hundred other articles on every conceivable topic connected with medicine or surgery. To mention only a few of the out-of-the-way subjects, information upon which is accessible to the possessor of this encyclopædia, there is a table giving the exact rendering, in degrees Fahrenheit, of every tenth of a degree Centigrade from $-45°$ to $+52°$, thus enabling the reader of foreign works to make the change at once into the Fahrenheit scale without the necessity of going through an arithmetical calculation. Another article treats, at all-sufficient length, of the legal rules concerning the collection of fees, and another upon the duties of army and navy surgeons in time of war. In the article on Histological Technique the reader can learn all that is necessary to enable him to prepare, mount, and stain microscopical sections of healthy and diseased tissues, and in the one on Habitations many valuable suggestions are made concerning the precautions necessary for rendering the dwelling a real protection, and not a death-trap, for those living in it. There are also articles on all the more important health resorts and mineral springs in the world. It is impossible, in a brief notice, to convey any adequate idea to the reader of the vast amount of information contained in this veritable mine of medical knowledge, and we can only say that it is a work which no physician can afford to do without. The contributors, ninety-one in number, are all from this country and Canada, and by their labors they are building up a monument of which Americans may well be proud.

A Treatise on the Principles and Practice of Medicine. Designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D., LL.D., late Professor of the Principles and Practice of Medicine and Clinical Medicine, in the Bellevue Hospital Medical College, New York. Sixth edition, revised and largely re-written by the author, assisted by William H. Welch, M.D., Professor of Pathology in Johns Hopkins University, and Austin Flint, M.D., LL.D., Professor of Physiology in the Bellevue Hospital Medical College, New York. 8vo, pp. 1,160. Philadelphia: Lea Brothers & Co. 1886.

There is a feeling of sadness experienced by the reviewer when he realizes the fact that the gifted author of this work has laid down his pen forever. It is the last touch of the vanished hand, the last thought from the brain that is still. Aside from its intrinsic merits as a leading work on the practice of medicine—an exponent of the present state of medical learning of the present century—it will have a special value to the student and practitioner as the last work of a careful observer and a conscientious teacher. The individuality of the author is here in all its force, perspicuity, and honesty. He dealt with facts, and interpreted them in the light of the science of the day. Wedded to no theory, he was ever ready to modify his views in accordance with the advances made in scientific research. There was nothing but truth for him, and he always aimed conscientiously and impartially to be on the right side. It is unnecessary to give a detailed account of the manner in which the task was accomplished. The work, as a whole, made its reputation as a trustworthy medical guide with its first edition. Large as was its field, nothing of importance was omitted. The author was essentially a clinician. His natural powers of observation and study directed him more particularly to the bedside of the patient. His pathological instincts were so subservient to this tendency that, in order to keep abreast of the advances in this department, he felt it his duty to summon to his aid one of the highest authorities in that department. As it now stands the treatise is rounded out into its properly comprehensive proportions, and will be reverently placed upon the library shelf as the last effort of a great medical writer. This edition is made especially valuable on account of several new and important articles, viz., on infectious tumors, syphilitic diseases of the lungs, cerebral syphilis, general considerations relating to inflammatory and structural diseases of the spinal cord, spastic cerebral paralysis of children, hereditary ataxia, myxœdema, multiple neuritis, general pathology of fever, and milk sickness. The volume is judiciously edited by the son of the author, Professor Austin Flint, who prefaces the work with an admirably written account of his beloved father's labors.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume Eighth. Pp. 460. P. Blakiston, Son & Co. 1886.

This publication is in general appearance and contents a most creditable volume.

Massage as a Mode of Treatment. By William Murrell, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminister Hospital, Examiner in Materia Medica in the University of Edinburgh, and to the Royal College of Physicians of London. Philadelphia: P. Blakiston, Son & Co. 1886.

This little book contains considerable information concerning the classes of diseases in which massage may prove of service and the benefits which may be expected to result from its employment. It is not a text-book on massage, but rather a pleasantly written essay, from the perusal of which one may learn what this system of therapeutics is and what it can do.

An Unusual Case of Poisoning.—The papers have recently related a fatal case of poisoning from an overdose of podophyllum. A physician in Maine ordered, in a prescription, "Podophyllum, gr. ss." The last two letters were mistaken by the druggist for figures, and read "88." He thereupon dispensed the latter quantity, which was taken at one dose (as was presumably ordered for the correct quantity), death occurring soon after. The clinical history of the case is not given; but the toxic symptoms were probably those of an acute irritant poison. However much the physician may be blamed for his illegible writing, it is hardly conceivable how any druggist could have given such a quantity of a powerful drug without at least verbal instructions to the customer as to its potency.

Simulated Hyaline Casts.—Dr. S. E. Armstrong, of Passaic, N. J., writes: "The simulated hyaline casts of Dr. F. Tilden Brown are unlike the true cast in the following particulars, viz.: They are longer, more flimsy, hence do not rotate on their long axes as readily as true casts do when the cover-glass is manipulated; are apt to be joined to each other by narrow bands of the same material of which they are composed, and *their ends*, when discovered, *do not have the rounded contour peculiar to genuine hyaline casts.* Dr. Brown would have us expect to find casts in the urine only when the chemical analysis reveals the presence of albumen; . . . 'but we may find casts without albumen, and albumen without casts' (Delafield, Pepper's Practice, p. 76)."

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, October 28, 1886.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. J. E. WINTERS read a paper [see p. 505] on

MATERNAL NURSING AND WET-NURSING.

The discussion was opened by DR. S. BARUCH, who was not willing to go so far as the author of the paper, on the question of the effect produced upon the uterus by nursing. Of course, whatever produces uterine contraction aids involution, and it is true that the application of the child to the breast produces contraction of the uterus or intensifies it. But he was not aware that this effect is produced after the first few days immediately after labor. Involution goes on with remarkable rapidity, the average period for its accomplishment being four or five weeks, and, after that, maternal nursing cannot afford any special advantage, so far as affecting the uterus is concerned. For the prevention of uterine disease he regarded maternal nursing as far inferior to the proper antiseptic management of labor, with abstinence from interference with the vaginal canal by either the finger or syringe after the confinement is completed. He was not opposed to maternal nursing, because it was the rational and physiological method of feeding children. At the same time it must be remembered that there are women whose physiological function, in this particular, cannot be relied upon. He thought that maternal nursing had but little bearing upon the development of uterine disease. He regarded wet-nursing as an evil, and never advised it except as a last resort. His experience enabled him to say that food for infants can now be obtained which so nearly approximates mother's milk that, in nearly all cases, wet-nursing can be avoided.

DR. E. L. PARTRIDGE believed that the period of uterine involution should be placed at three months, rather than the shorter time mentioned by Dr. Baruch. If that be correct, the cause for many acute disorders, which terminate in chronic affections of the pelvic organs, may be found in subinvolution. Anything, therefore, which favors involution guards against the development of uterine disease. He, therefore, was strongly in favor of maternal nursing, unless impossible, for at least three or four months after labor.

Abstinence from night nursing is an important point, and where artificial feeding is to be begun, it should be introduced at the time when the child requires something besides the mother's milk. Of course, this requires the assistance of a competent nurse, so that the mother may have seven, or eight, or nine hours of undisturbed sleep.

With regard to the wet-nurse, he believed all that Dr. Winters had said concerning her, and yet he believed that she has an important place, not against the mother who is able to nurse her child, but against the mother who, by inheritance, is incapable of nursing, or who, after two, three, or four months, gives evidence that she has not a good supply of milk, and then he preferred a wet-nurse to artificial food. He thought that a week's attention to the selection would enable one to obtain a wet-nurse far more desirable than those which Dr. Winters had described, and he would not say no more wet-nursing, because of the comparatively few bad wet-nurses to which reference had been made by the author of the paper.

DR. E. H. GRANDIN was fully in accord with the writer of the paper with regard to the influence of proper lactation in preventing certain diseases of the pelvic organs. He was satisfied that one of the most favorable oxytocics, after labor, is the application of the child to the breast, and he believed that this influence extends even to three months.

He would also say a word in favor of the wet-nurse. He could conceive of circumstances under which he would be unwilling to dispense with the wet-nurse, and believed that irregular and improper artificial feeding had quite as much to do with infant mortality as did wet-nursing. Of course, for obvious reasons, it was more desirable to give the child to a wet-nurse in the spring than in the autumn.

DR. J. LEWIS SMITH was not opposed to the employment of wet-nurses, because he believed that there was another side of the question to be considered. In his own practice he always advised their employment for children under six months of age, when it becomes impossible for the mother to continue to suckle. He believes that, when mothers are not able to suckle, *proper* wet-nursing will reduce the rate of infant mortality.

What he had to say, therefore, related entirely to the disastrous results of wet-nursing. These were due to a considerable extent to the scarcity of good wet-nurses, and this scarcity was influenced largely by the fact that very many mothers who are abundantly able to nurse their children did not, for a great variety of reasons, do so. Medical men should, therefore, urge and insist, as strongly as possible, that the mothers who were able to do so should nurse their children, and thus enable very many who really need them to obtain good wet-nurses.

In some instances the employment of wet-nurses increases the aggregate of infant mortality in this city, and chiefly with respect to the infants of the wet-nurses themselves. Wet-nursing also may result disastrously to the infant because of the unfitness, both morally and physically, of the wet-nurse, and also because of the liability that the wet-nurse will administer to the child opium, alcoholics, etc.

DR. A. CAILLE sympathized with Dr. Winters in his opposition to wet-nurses, but also thought that many such papers would not abolish one of the evils described, because the wet-nurse would get something else to do and her child would fare no better than it does now. All attempts to make food which can be used as a substitute for mother's milk have, so far, been failures. He believed that most physicians would decide in favor of wet-nurses, and especially in the early part of the warm season. In some cases an effort should be made to give artificial food.

DR. WINTERS, in closing the discussion, said that no woman should be allowed to nurse her child in the night, nor should she be allowed to sleep in the same room. With regard to the child of the wet-nurse faring about the same, whether its mother followed the occupation of wet-nursing or not, he thought that these women were tempted by the offer of large wages, which they could not obtain elsewhere. At some future time he hoped to have an opportunity to read a paper on wet-nursing *versus* artificial feeding, but it would be with precisely the same views in mind as he had advanced in the paper for the evening.

The Section then adjourned, to meet on the *fourth Wednesday* in November, the fourth Thursday being Thanksgiving Day.

THE LENGTH OF A STEP.—Dr. Gilles de la Tourette has recently published a monograph upon normal locomotion and the variations in the gait caused by diseases of the nervous system. He found, from a comparison of a large number of cases, that the average length of a pace is, for men 25 inches, for women 20 inches. The step with the right foot is somewhat longer than that with the left. The feet are separated laterally in walking about 4½ inches in men, and about 5 inches in women. The ataxic gait is characterized by an actual shortening of the pace coinciding with an apparent lengthening, and by a considerable increase in the lateral separation of the feet.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HEALTH OF THE SEASON—TESTIMONIALS—SIR A. CLARK—DR. REDWOOD—THE LIVERPOOL HOSPITAL FOR WOMEN—THE CLINICAL SOCIETY—MALFORMATION OF THE HEART—THE TONSILS—PULSATING TUMOR OF HEAD—THE OBSTETRICAL SOCIETY—THE COMING ELECTION.

LONDON, October 16, 1886.

SEPTEMBER was with us unusually fine and summer seemed, therefore, prolonged. So little rain fell that gloomy prognostications told us we should suffer for it later on, and some even declared such weather unhealthy. The rainfall for three months past has been only a little over half the average, 2.5 inches, instead of 4.9. Some fears have therefore been expressed as to the supply of water in the coming spring. These, however, may be relinquished, for so far October has not maintained its repute for dryness. We have had very heavy and frequent rains, I should think enough to make up for the previous deficiency, and as a dweller in a city I should rejoice to have the crisp, dry, healthy weather of our old Octobers prolonged into November, as drizzling September was postponed to October.

Sir Andrew Clark has finished his twenty years' service at the London Hospital, and therefore passes to the retired list with the title of consulting physician to the charity he has so long and so well served. His admirers are taking the opportunity of getting up a testimonial to him. It will be remembered that on the retirement of his surgical colleague, Mr. Jonathan Hutchinson, a testimonial to him was also raised. It is to be hoped that we are not about to allow such movements to crystallize into regular precedents. It would be an awful infliction if the profession were to be expected to subscribe to a fund for every senior physician or surgeon of all our numerous hospitals. If the governors of such charities choose to recognize the services rendered by professional men, by all means let them, but really the other doctors who are working gratuitously ought not to join in such a movement. In Sir A. Clark's case there are, perhaps, exceptional circumstances, but it is well known that he is a wealthy man, and, therefore, costliness would be to him no attraction in a testimonial. I therefore hope no one will subscribe a large sum—I mean no doctor—let the public give as freely as they please. As a medical testimonial I should have thought an address from his colleagues would have been appropriate.

Dr. Redwood, whose eminent services to pharmacy are well known on your side of the water, is to have a testimonial. The fund for this will shortly close. I hear it has been successful.

The discussion at Liverpool respecting the surgical proceedings in the Hospital for Women seems to be by no means approaching a conclusion. Sir Spencer Wells has been induced to intervene, a letter having been sent to him from the secretary to elicit his opinion, which he has given with a brevity and distinctness which is unmistakable, and he has enclosed the secretary's letter and his reply to Dr. Grimsdale as consulting physician to the hospital, with his permission to use the correspondence in such way as he pleases. Dr. Grimsdale accordingly sends it to the *Lancet* and this journal publishes it to-day. Much comment is being excited and it is to be hoped some good will come out of the controversy.

The Clinical Society held its first meeting on the 8th inst., Mr. Bryant in the chair, when Dr. Charlwood Turner read an account of a case of congenital malformation of the heart, and remarked on the causation of bruits preceding the cardiac sounds. The patient was a little boy of six who had been under observation for four years. There was a systolic bruit over the pulmonary valve, and this was followed by a well-defined "prediastolic" bruit running up to an accentuated second sound and accompanied by a slight thrill. The bruit was conducted down the sternum. Dr. Turner thought that the conditions existing in this case and the sounds produced confirmed Dr. Barclay's view of the causation of presystolic bruits, and gave a sufficient explanation, and indeed the true interpretation, of the clinical facts. Dr. Carrington and Dr. Coupland made some remarks, but did not seem to consider the precise mode of causation of much consequence.

Mr. Gould brought forward a case bearing upon the association of disease of the tonsils with other organs, which gave rise to some conversation on this subject. Mr. Treves related a case of pulsating tumor of the head with Raynaud's disease, and exhibited the patient to the meeting. There seemed to be two pulsating tumors, and they appeared to be of a different nature. One was in the middle line of the occipital region, the other was over the left mastoid and appeared to be a cirsoid aneurism, while the former was thought to be of a venous character and in communication with the superior longitudinal sinus. The patient was a lad of seventeen who, for a year or more, had suffered from headaches, vomiting, and vertigo. Both carotids were enlarged, as well as the temporo-facial and internal jugular veins. There was protrusion of the eyeballs and a difference in the size of the palpebral fissures, giving a very strange look to the lad, and when he tried to look toward either side the globes were agitated by rapid movements—horizontal nystagmus. There were other interesting symptoms complicating the case.

The Obstetrical Society has also begun its winter work, having opened on the 6th inst., when some interesting specimens were exhibited and cases related.

As the time of election draws near the candidates for a seat in the General Medical Council are endeavoring to stir up an interest in the subject. Some of them are general practitioners and want to persuade their brethren that they alone can represent their views. It is hardly clear to ordinary observers that diligence and success in family or club practice is the only qualification for a council of medical education. One would certainly suppose that experience as a teacher would be quite as useful, though it is true there are plenty of teachers on the board. So far, the only question which produces excitement is the conduct of the so-called Birmingham Committee, which is generally denounced as a caucus or a clique, though those who took part in it get angry at such expressions. I was at Brighton when this caucus was proposed, but the British Medical Association refused to take any part in nominating candidates. Thereupon a few of the councillors of the association met at their hotel and determined that they would nominate. They adjourned to Birmingham, where thirty-two gentlemen met and took measures to propose, in the name of themselves and correspondents, three councillors of the association who had kindly mentioned each other at Brighton, and since then these three councillors have had all the influence of the *British Medical Journal* at their disposal, and a shameless attempt is being made to manipulate the branches notwithstanding the refusal of the association in general meeting assembled to countenance such proceedings.

BRAINS OR HAIR.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Two remarkable editorials have appeared this month in THE RECORD, entitled, "The Progress and Prevalence of Baldness in America" and "The Long-beard Habit." The former argument is based on Mr. Eaton's observation as published in the *Popular Science Monthly*, while the latter appears to be purely editorial in basis and development. The paper of Mr. Eaton treated the

bald-heads with great respect, showing that Mr. Eaton may have a wholesome fear of bears; for he contradicts the paragrapher's usual statement that the bald-headed man is generally found at the variety theatre on the front seat, gazing at the ballet-girls, and goes on to say that religious meetings are graced by bald-heads in direct proportion to the refinement of the religion; and, in fact, draws the general conclusion that culture and brain-development are associated with baldness, because bald-heads are more prevalent East than West, and are found in the more cultivated public meetings, whether the meetings are in the interest of religion, art, or science. In fact, the central idea of the editorial begins to show up in this article, for his conclusion is that "baldness is in direct proportion to the amount of education and cultivation which a community receives." But this article does not declare so distinctly that there is a relation of cause and sequence between loss of hair and brain-development, in the sense that loss of hair may result in giving more bodily energy which may be used in brain-development; or, in other words, that there is good reason for the opinion that some people are "hair-brained."

So far as these conclusions and observations are concerned there is no question that baldness is increasing, and that it is increasing among the more highly civilized and more cultured races and individuals; but an observation of this kind, taking note of only two factors of biology—hair-growth and brain-development—is apt to be misleading. Such a problem, stated in such a manner, might delude innocent people into the belief that loss of hair contributes to mental growth and development.

The obverse side of this proposition will read that intellectual effort, by absorbing vital energy, draws part of this energy from the hair-glands and causes baldness; hence the more highly cultured men in medicine are bald. There is a hint here for our professional sisters, except Dr. Mary Walker; and perhaps the old universities will graduate more women physicians with honor if the women will wear short hair, to give themselves an equal intellectual chance with the men.

In the second editorial the argument is that "beards must go," as they are unsanitary, are not worn by the more highly cultured physicians, or eminent men in the profession (or eminent medical women). Beards, especially if they don't happen to split at the ends and grow long, are "characteristic of an undeveloped civilization." (Then why do American Indians, native Bushmen, negroes, Esquimaux, Kanakos, Mexicans, cow-boys, gorillas, monkeys, Chinese, and Sandwich Islanders, have short beards or none at all?) "Hercules was bearded, but Apollo was smooth-faced." (Perhaps the people who invented Hercules had a delusion that vital energy was a hairy affair, and they shaved Apollo, the better to show his pretty face.)

But now comes the *grand dénouement*: "Hardly a doctor of the first eminence in the world's history ever wore a long beard, and he who possesses one may as well concede at once that he will never rise above mediocrity."

Following this proposition to its logical conclusion on the data given to support the proposition, the conclusion must be that the beardless men and the women are to be the coming doctors, while the "captain with his whiskers" will retire to the kitchen or nursery, and find there the duties which he is intellectually fitted to perform.

The editorial gives the data for this conclusion as follows: First, that the vital energies in hair-growth absorb energy that might go to mental development; and second, that certain eminent men in the profession became eminent because they "*patronized the barber*" and therefore wore short beards; as, "Linacre, William Harvey, John Hunter, Benjamin Rush, Dupuytren, Nélaton, Andral, Laennec, Cuvier, Bichat, and Ricord, and turned the iphysiological energies that might have been lost in mak-ng hair into the making of brain" (verily it was a question of making hair or brain with these gentlemen, and not fashion).

I suppose, but I do not want to be personal, that this editorial was written by a gentleman who was in a hurry; otherwise how could an Eastern gentleman, high up in the profession, who, therefore, is bald-headed and smooth-faced, except perhaps a few straggling hairs for a mustache, ever write two propositions, either of which destroys the other instead of proving anything. These eminent Englishmen, Frenchmen, and Americans wore short beards because they patronized the barber, and thus diverted vital energies to making brains instead of hair. Now, if it is true that vital energy can be so diverted or correlated, it was not true in these instances; for patronizing the barber does not prevent the beard from growing, and thus cannot change the vital current from hair-wards to brain-wards. These eminent men probably gained their brain-development because they were industrious men, and they shaved because they wanted to, or because such was the fashion. The proposition that loss of hair results in brain-development and intellectual eminence reminds me of a story.

A professor of midwifery gave a lecture on sterility, and, among other signs and symptoms, he stated that he had observed that the hair on the pubes of sterile women was straight, while on the pubes of child-bearing women the hair was curly. A smart student wanted to know if curling the pubic hair would cure sterility. I really think this student's proposition was as sound as the editor's theory of how to cure "professional mediocrity," and I also think, if there is anything in it, that the States which now control medical practice should at once pass an act compelling all doctors to shave, in the interest of a "higher medical education," and appoint a State Board of Barbers as auxiliary to the State Boards of Health. As shaving the beard cannot lessen hair-growing energy, those doctors who rise to eminence through their patronage of the barber should be tested. They are frauds. A State board should therefore be established to not only examine a man who wants to practise physic, but this board should also test a man by finding out if his beard would grow to a great length or thickness provided he did not shave. This is the only way to test this question and "rid the profession of incompetents."

Ole Bull could render beautiful music with only one string to his violin. Bull was a master in the art. Similarly, some (short-haired) men can solve a problem with only one or two factors given. Cuvier and Agassiz could take one bone of an individual of an extinct and unknown species and make a drawing of the whole skeleton. But our common musicians, were they to attempt the one-string business, would only fiddle on one string, while like disasters wait upon certain other workers in different fields. There is no greater subject than the relations of mind and body; and therefore no subject which a man should attempt to teach with more caution. And now, to better understand this question of the relation of hair to brains, let us introduce a new factor in the problem, known as natural selection.

With this factor in hand no man is justified in studying any human problem from the basis of any single individual species or race, but ethnological questions must be studied in all relations to all races, in the light of human history, and also in the light of zoölogy. Doing this, we will find, first, that the question of the habit of life and the climate are the first factors to know in the hair question. The animals of warm climates have less fur and hair than those of cold—irrespective of mental development. As animals develop mentally they live more in caves and hollows, in trees and burrows, and get along with less hair, but more intellectual eminence. Coming up, or down, along the line of animal development, we reach the monkeys. These animals have short hair all over, but are not good for fur. They wear their hair short, and most species have no beards, though I think, without looking up the matter, that the chimpanzee, a very intelligent variety, has quite a flowing beard. The chimpanzee has never attained any very great eminence as a monkey.

He is never seen riding a hand-organ, or passing a hat for pennies, but occupies a very dignified position in the "Zoo" gardens. The little common monkey, with a tail, certainly attains a certain kind of eminence. He has no long beard, his hair is short, his "smellers" are few and far between—like the modern intellectual mustache—he can gibber perpetually, climb a greased pole to eminence, and hang all day by his tail. The chimpanzee has no tail, but quite a beard. He looks more human; and it was doubtless the chimpanzee which gave the suggestion for the mightiest idea of the nineteenth century to the "only greatest" intellectual giant of this century, whose name was Charles Darwin—whose head was bald, but who didn't patronize the barber and wore a heavy beard.

Coming down, or up, to the early human progenitor, we find that the cave-man had hair all over his body, short whiskers, and not very long hair on his head. But he spent many centuries toasting his shins by the fire, making graven images of his hairy-coated sweethearts on pieces of deer-horn, and learning to sew. He clothed himself with the fur of animals, except his face, and natural selection, therefore, took the hair off his skin; and as he couldn't make plug hats, the hair on his head and face grew long as he approached civilization.

As we can do no better in a short space, let us look at an epoch or two of human progress. We have all read more or less of Chinese history and the European history of the dark ages. The Chinese, for centuries, have shaved their faces, and all of their heads except a little spot for a pig-tail; yet there is no particular eminence in the medical profession of China. The Europeans of the dark ages were closely shaven. They shaved their faces, and also a good share of their heads, and the custom is yet preserved as a heritage among some religious sects. Europe was brought out of the ignorance of the dark ages by long-whiskered Islamites, who brought school-books, tore down churches, established school-houses, and natural science, and swore—not by the cheek of a shaven monk, but by "the beard of the prophet."

The civilization of Europe hinged on the conduct of these long-bearded and unshaven men, and if not for them we would all of us to-day, perhaps, be shaven monks or, worse, shaven believers, without the science and civilization of this nineteenth century, and without the factor of natural selection as an aid to the solution of problems of life, and mind, and hair.

Looking at the present epoch of civilization, we will find that the majority of men have beards if they don't shave or patronize the barber. A large number of men will have long beards if the hairs don't split. The men who wear plug hats, or who get the depilatory germ in their heads, will grow bald. The Western men, who wear hats of more ventilating texture, have heavier hair. The beard of most men grows heavy, because the face is exposed. Women have less baldness, because three or four straws, with a stuffed bird, are not much "protection" to the head, and women don't have whiskers, because—well, who would want a woman, even a woman doctor, with whiskers? We will all agree with that old gentleman who wrote the Epistle to the Ephesians, and which somehow miscarried so that he never received an answer, that the glory of woman is in her hair, though we may not believe that other story about Samson any more than we believe that mental strength depends upon no hair.

Professional long beards or short ones depend upon the taste of individual professionals, or upon fashion. It is within the memory of many of us, graybeards, when the fashion was imperative to shave, and a mustache was an abomination that could not be tolerated in polite society; in fact, the hoodlums on the street would follow and hoot after a man who had the gall to wear a mustache. If it can be made to appear that patronizing the barber is necessary in order to appear eminent, from the delusion that short hair, shaven, makes brain, then the doctors will all shave, or be shaven, of course. It is quite likely, however, that the only relation between hair and intellectual development and professional eminence rests upon the fact that the golden moments spent by the young doctor sitting in a barber-shop waiting for his "next," and whiling away his time looking at the bawdy literature which abounds in barber-shops, will use so much of his time and so corrupt his taste that he can never be eminent.

ROMAINE J. CURTISS, M.D.

JOLIET, ILL., October 22, 1886.

[We are much obliged to Dr. Curtiss for his interesting letter. Many of our illustrations were intended to be figurative rather than literal, but their ingenious use in the arguments of our correspondent gives a somewhat novel complexion to the discussion.—ED.]

AIR WITHOUT MICROBES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a recent issue of THE MEDICAL RECORD, October 9, 1886, I read an article by Dr. Baldwin, headed "Is there Air without Germs?" upon which I beg the privilege of offering a few brief comments. In order to more clearly convey my idea, I will preface my remarks with a rude classification of micro-organisms. For our present purpose we conveniently distinguish between fungi cryptococci and schizomycetes. The fungi and cryptococci rarely produce disease as compared with the schizomycetes. Under the head of schizomycetes we recognize microbes which are continually identifying themselves with particular pathological conditions. They are the micrococci or round form, the bacteria or oval-shaped, and the bacilli or rod-like. The micrococci are also specially designated according to the relation they assume one to another—when in pairs, diplococci; in chains, streptococci; in bunches, staphylococci; in masses, zoogloea. Now it is absolutely proven that we cannot have suppuration without the staphylococcus pyogenus. But we may have the staphylococci present and not have suppuration. In other words, they must be in sufficient numbers under conditions favoring the development and growth of their spores before suppuration can occur. To substantiate this, I will refer to Dr. Knapp's remarks before the Twenty-second Annual Meeting of the American Ophthalmological Society (*American Journal of Ophthalmology*, vol. iii., p. 254). He said: "It must be remembered that in the majority of operations a certain quantity of infecting material is required to produce any effect. Where there is a free escape of liquid from a wound, the material is washed off; but where there is a sucking process, the danger is much greater." Dr. J. A. Andrews, of New York, concludes that mere contact of the microbe is not *always* sufficient to produce suppuration, especially in the case of the cornea, where the material is liable to be washed off. But where the material containing the staphylococcus pyogenus has been introduced into the wound and kept there for a short time he had never seen a failure to produce suppuration. Now, Dr. Baldwin argues that, because he has had twenty-three cataract operations without any suppuration, the "pyogenic germ" was necessarily absent, and therefore it was not necessary to take precautions against it. He thereupon laughs at the idea of there being any such germs existing in his region, and says that it is necessary to take antiseptic precautions only in hospitals.

By referring to Dr. Billings' malarial map one would be naturally led to suppose that "germs" existed in Alabama in a high state of development and in great luxury. But, of course, there may not be any "pyogenic" microbes. This is a very dangerous position to take, for who can tell when they are present and when not? Shall we wait until the enemy is upon us in full force before we attempt to defend ourselves? Would it

not be wiser to follow the teachings of our most progressive surgeons and be continually on the alert? The doctor is probably following his prejudice, which is all right, but he should not expect others to repeat it. He refers to Tait (as does everybody else who has anything to offer against antiseptics), with his one hundred and thirty-nine laparotomies without a death. It is just as difficult for a great number of the profession to swallow, unmasticated, all Mr. Tait says as it is for Dr. Baldwin to swallow "each new-hatched theory of the German laboratory." To use the abandoned spray as an argument against antiseptics in surgery simply shows how weak the opposition is. Antisepsis in surgery has produced results in wound treatment undreamed of a few years ago; has made accessible to the surgeon regions which heretofore were considered clearly beyond his domain. Antiseptics have practically rendered extinct those diseases depending upon suppuration, viz., pyæmia, hospital gangrene, etc. Surgeons may differ as to the relative merits of different antiseptics, but they agree as to the underlying principles. I have lately visited a large number of hospitals in both the East and West, and I can assure you the men who are piling up statistics of new and great operations are the workers in antiseptic surgery.

W. Edwin Ground, M.D.

Toledo, O., October 18, 1886.

MRS. CHARLES F. WOERISHOFFER'S GIFT TO THE NEW YORK ACADEMY OF MEDICINE.

The following is the correspondence relating to the recent munificent gift to the New York Academy of Medicine:

Dr. A. Jacobi.

Dear Sir: Please find enclosed a check for the Academy of Medicine, which I send you in memory of my husband, the late C. F. Woerishoffer. In selecting the Academy of Medicine as one of the institutions to which I intend to distribute a certain sum, in accordance with the wishes of my husband, I am led by the high appreciation Mr. Woerishoffer always entertained for the medical profession.

Yours very sincerely,

Anna Woerishoffer.

Dr. Everett Herrick, *Chairman Board of Trustees, New York Academy of Medicine.*

Sir: In presenting a munificent donation to the New York Academy of Medicine, Mrs. Anna Woerishoffer was guided, firstly, by the great respect her late husband, Mr. Charles F. Woerishoffer, always felt and expressed for medical science and the medical profession; and, secondly, by her conviction that it is better to aid and sustain such institutions of either science or charity as have already proved their faculty and right to exist by duration, results, and accumulated property, than to create new institutions.

After mature deliberation she came to the conclusion that the New York Academy of Medicine has, by its publications in the journals of the country, and in numerous volumes of transactions and bulletins, and by its regular stated and section meetings, largely contributed to the progress of medical science, and deserves eminently the name of a scientific body.

That, after having existed forty years, collected an ever-increasing library, and accumulated considerable property, the New York Academy of Medicine holds out the promise of perpetuity.

That, by excluding politics and ethical strifes from its constitution and gatherings, it deserves the name of a purely and exclusively scientific body, and thereby the confidence of the public; and that it must necessarily become, and be, the centre of the scientific interests and labors of the medical profession of New York.

Mrs. Woerishoffer was also struck with the fact that the present building of the New York Academy is too small for its present and future purposes; that not only its sections require more accommodations, but that every medical and scientific society of the city ought to find ample room within its walls, and look upon the academy as its proper centre; and, finally, that the increasing library is in urgent need of a fire-proof building.

From these points of view Mrs. Woerishoffer desires to contribute to the means required for enabling the New York Academy of Medicine to accomplish its great ends and reach its high aims, which she takes to be both truly scientific and truly humane.

I have the honor, Mr. Chairman, of enclosing Mrs. Woerishoffer's letter and her check for $25,000.

Very respectfully yours,

A. Jacobi, M.D., *President.*

Mrs. Anna Woerishoffer.

Dear Madam: The Trustees of the New York Academy of Medicine gratefully acknowledge the receipt of your check, through Dr. Jacobi, for $25,000, sent in memory of your husband, the late Mr. C. F. Woerishoffer, and in accordance with his wishes. In accepting this gift the Trustees desire to thank you as the almoner of your husband's estate, and hope so to use it that no one bearing his name shall have cause to regret "the high appreciation which Mr. Woerishoffer always entertained for the medical profession."

Yours very truly,

Everett Herrick, M.D., *President.*

Geo. A. Peters, M.D., *Secretary.*

New York, October 22, 1886.

Mrs. Anna Woerishoffer, New York, N. Y.

Dear Madam: At a meeting of the Academy, held Thursday evening, October 21, 1886, the following resolutions, moved by Fordyce Barker, M.D., and seconded by C. R. Agnew, M.D., were unanimously adopted:

Resolved, That the New York Academy of Medicine accept with the warmest thanks and gratitude the noble gift of $25,000 from Mrs. Anna Woerishoffer as an expression of the appreciation by her late husband, Mr. Charles F. Woerishoffer, and herself, of the importance of the medical profession to the health and welfare of the public, as well as to individuals, and the necessity for the development of its highest culture.

Resolved, That the names of Mr. and Mrs. Charles F. Woerishoffer be inscribed in the Academy for permanent record as benefactors.

Resolved, That a copy of these resolutions, duly engrossed, and signed by the President, Recording Secretary, and Treasurer, be transmitted to Mrs. Woerishoffer.

A. Jacobi, M.D., *President.*
A. M. Jacobus, M.D., *Secretary.*
F. A. Castle, M.D., *Treasurer.*

A Bullous Eruption caused by Salicylic Acid.—Dr. Rosenberg reports in the *Deutsche Medicinische Wochenschrift* a case of rheumatism treated successfully, as regards the articular pains, with salicylic acid. But the patient complained of a severe burning of the skin, and the body became covered with purplish spots. The medicine was discontinued for a time, but on another trial, a month later, the same sensation was complained of, and in addition to the discoloration of the skin there appeared a number of large blebs filled with serum, situated on the back and extremities, and also upon the conjunctiva and mucous membrane of the tongue and lower lip. A third trial resulted in a precisely similar eruption. Examination of the fluid in the blebs failed to reveal the presence of salicylic acid.

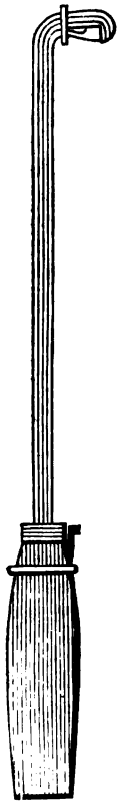
New Instruments.

A NEW NASAL ILLUMINATOR.

By J. A. THOMPSON, M.D.,

CINCINNATI, O.

The idea of illuminating the nasal cavities for medical examinations from the naso-paryngeal space is not a new one. But a cheap, simple, and effective device for this purpose is not generally known to the profession. The necessity for some better means of examining the nasal fossæ than we now possess is too evident to need discussion. By no method now in vogue can more than half of the nasal cavity be seen. Even so good an observer as Morell Mackenzie, in his statistics showing the place of origin of nasal polypi, gives only their apparent, not their real, site. Examinations of the posterior nares and the walls of the naso-pharynx are attended by so many difficulties that many competent observers say they are unsatisfactory in a majority of cases.



To overcome these difficulties, to avoid the necessity for groping in the dark in many cases of disease of the upper air-passages, I had made, nearly a year ago, the instrument a brief description of which is appended. It has been such a help to me in difficult cases in my own practice that I desire to make it more generally known.

A small incandescent lamp (see cut) is mounted on a metal tube curved on a short radius to an arc of 90°. This delicate lamp is protected from injury, by the spasmodic contraction of the throat muscles, by a metal shield. The inner side of this shield is polished and serves as a reflector. It is movable, and can be turned so as to throw the light on either Eustachian orifice, through the nose, or on to the posterior wall of the pharynx, and can be removed for cleansing or polishing when soiled. The tube and lamp are provided with a hollow wooden handle for ease of manipulation, and to afford means of connecting the lamp with a battery. An insulated wire in the tube, connected with a metal plate in the handle, forms part of the electric circuit. The circuit is completed by the lamp, the tube on which it is mounted, a switch, and a second metal plate inside of the hollow wooden handle. This arrangement makes it possible to use a smaller tube than could otherwise be employed. By putting a switch in the circuit the light is completely under the control of the operator. The distance from the bottom of the tube to the top of the lamp is less than three-fourths of an inch, so it can be readily guided into the naso-pharyngeal space. It is usually well borne. Care must be taken, however, not to touch the parts with the lamp itself, as it becomes quite warm if the examination be prolonged.

The film of air between the lamp and metal shield prevents the latter from becoming heated, and contact with it has no more effect on the throat than that of any other smooth instrument. Should the patient's throat prove too sensitive to permit of examination without it, an application of cocaine will render it tolerant.

With the lamp in position in the naso-pharyngeal space, when the anterior nares are dilated by any good speculum the whole of the nasal cavity is seen to be brilliantly illuminated and can be examined in detail by varying the position of the lamp. Unless there is marked deviation of the septum, or hypertrophy of the Schneiderian membrane, the lateral and posterior walls of the naso-pharynx can be clearly seen through the inferior meatus by turning the reflector.

This light will also be found serviceable in a way not thought of when it was first made. In ordinary post-rhinoscopic examinations the light is reflected, diffused, and again reflected. In each of these processes some rays of light are lost, and the image is rendered indistinct for want of sufficient illumination. The small lamp I have described offers no obstacle to the use of the rhinoscopic mirror, and the image afforded is as much clearer as the illumination is better.

Three cells of any ordinary galvanic battery will furnish current enough to light the lamp. For office use a storage battery is a great convenience.

The advantages of this method of illumination in cases of tumors of, or foreign bodies in, the nose or naso-pharynx, or for determining the condition of the mucous membrane in any of the diseases to which these cavities are subject, are too apparent to need mention in a brief descriptive article.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 24 to October 30, 1886.

BILLINGS, J. S., Major and Surgeon. Granted leave of absence for eight days. S. O. 246, A. G. O. October 22, 1886.

LAUDERDALE, JOHN V., Captain and Assistant Surgeon. Leave of absence extended one month. S. O. 249, A. G. O. October 26, 1886.

CORSON, JOSEPH K., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect when his services can be spared. S. O. 246, A. G. O. October 22, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Relieved from duty in Department of the Columbia, and ordered to report in person at Headquarters, Division of the Pacific, for assignment to duty. S. O. 87, Division of the Pacific, October 16, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 30, 1886.

DIEHL, OLIVER, Passed Assistant Surgeon, U. S. N. Granted three months' leave from October 26th.

THE ANALYSIS OF A SO-CALLED NERVE-FOOD.—Dr. Francis Wyatt, of this city, having analyzed for the *American Analyst* the "Moxie Nerve-Food," found that it contained nothing but a little essential oil and the infusion of some ordinary bitters. It is, he says, practically an inert mixture.

THE LATE DR. THOMAS A. MCBRIDE.—At a meeting of the Medical Board of the Presbyterian Hospital, held October 16, 1886, the following resolution was adopted:

Resolved, That in the death of Dr. Thomas A. McBride the Medical Board of the Presbyterian Hospital has lost a member whose high professional attainments, devotion to duty, and winning personal qualifications, have won for him the highest esteem of his associates. Though still far from having reached the meridian of life, he was deservedly in the enjoyment of the full noon-day of professional reputation. While we mourn deeply the loss of our friend and associate, we realize that the good work which he has done remains as a monument to his conspicuous ability and as a stimulus to his survivors to a like devotion to the highest aims of their calling.

WILLIAM H. FLINT, M.D.,
Secretary of the Medical Board.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 30, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	39	16
Scarlet fever	28	5
Cerebro-spinal meningitis	2	2
Measles	162	17
Diphtheria	79	48
Small-pox	0	0
Yellow fever	0	0

DEATH FROM BROMIDE OF POTASSIUM.—The symptoms of chronic bromism are well known, and cases of this condition are not rare, but the only death reported from this cause was, we believe, that related by Hameau in 1868. The patient was an epileptic, twenty-two years of age, who took about four and a half pounds avoirdupois of potassium bromide in the course of ten months. A second case has been reported by Eigner in the *Wiener Medizinische Presse.* The patient was a girl, nineteen years of age, who became epileptic at the age of six in consequence of a fright caused by an attempt at rape. She had taken bromide of potassium, without medical advice, for about a year, beginning with a small dose, but increasing it rapidly until, for some weeks, she had been taking two teaspoonfuls of the salt a day. The epileptic attacks ceased, but the patient began to grow weak and irritable, was unable to sleep, had vertigo, difficulty of vision, and slowness of speech, and lost her memory. There were salivation, foul breath, and an eruption of acne on the face and over the entire body. The author calculated that the girl had taken over three pounds of the drug in the course of a year. She was admitted to hospital, but no improvement followed; she became delirious, and finally died. Just before death signs of a commencing pneumonia at the base of the right lung were discovered, but while this perhaps hastened the fatal termination, death was inevitable and was evidently attributable to bromism. The only lesions found at the autopsy, in addition to the pneumonia, were a slight bronchitis, and hyperæmia of the brain and meninges.

IODOL IN GYNECOLOGICAL PRACTICE.—Dr. Ménière has used iodol with excellent results as a local application for ulcerations of the neck of the uterus, and even in a few cases of vulvitis in strumous girls. He employs a mixture of iodol half a drachm, glycerine one ounce, and alcohol two ounces.

THE IODOFORM RASH.—Mr. Frederick Treves reports, in *The Practitioner* for October, 1886, a peculiar exanthem which he observed in a case in which iodoform had been freely used for three weeks. At the end of this time the entire forearm, upon which was the wound, became evenly swollen, œdematous, and a trifle red. On the following day a crop of vesicles was found on the forearm, the eruption having appeared in the night. The vesicles, about thirty in number, were small, and varied in width from one to three lines. They were limited to the forearm, and were not more numerous in the vicinity of the wound. The iodoform was now discontinued, but the vesicles went on to suppuration, discharged a little, and then soon healed up. Three days later a remarkable exanthem appeared, covering the left arm and shoulder, the greater part of the face, nearly the whole of the front of the chest, and some part of both sides of the neck. The right upper limb, the legs, the abdomen, and the back were quite free. The eruption appeared in the form of patches. Each patch consisted of a number of closely packed papules. These papules were all of less size than a pin's head, and were set upon a pink erythematous base. The little papules could be felt as well as seen, and they were paler than the surrounding skin. The erythematous patches varied in size from a sixpenny to a half-crown piece. They were irregularly round, and ran the one into the other. The margin of each patch was clearly defined. The child presented no constitutional symptoms. She appeared to be in perfect health, and her appetite was excellent. In about two days the eruption had disappeared, and was represented only by a faint yellowish tinge of the skin. From the time of the appearance of the vesicles to the end of the exanthem there had been a regular elevation of temperature of 99°. in the morning and 100° in the evening. During the day preceding the appearance of the exanthem the patient had complained of intense headache and giddiness, and of not feeling well, but all those symptoms disappeared as soon as the eruption became visible. Zeissl, Neisser, and Goodell have reported cases of a similar nature.

IKTEROS TYPHOU is the name given by the local physicians to a disease which has been very prevalent in the Grecian city of Nauplia, the capital of the province of Argolis. It attacks chiefly those in easy circumstances, and usually terminates fatally in from one to three or four days. The symptoms of the disease are not reported, but it is said that the dead bodies are first of a bright-yellow color, which changes to black as decomposition rapidly sets in. The etiology of the disease is uncertain. Some of the physicians attribute it to the leaky condition of the city sewers and consequent pollution of the soil, others to the presence of neighboring marshes. It is hoped that a commission may be sent to Nauplia by the government to make a scientific study of the disease.—*Nederlandsch Tijdschrift voor Geneeskunde.*

BEJUCO.—M. Sacc, of Cochambo, in a note addressed to the Academy of Sciences of Paris, describes a plant, called by the natives bejuco, which enjoys a reputation in equatorial countries as an efficient antidote to the bites of venomous snakes.

A MONUMENT TO ROBIN.—The friends of Charles Robin have opened a subscription list, in order to obtain the funds necessary for the erection of a monument to his memory. Quite a sum has already been collected, the subscriptions running from five francs up to five hundred francs.

THE MORTALITY OF ENTERIC, TYPHUS, AND SCARLET FEVERS.—Dr. Henry Handford presents, in *The Practitioner* for October, 1886, the results of a study of a large number of statistics, taken from the records of hospital and private practice, bearing upon the mortality and incidence of enteric fever, as influenced by age, compared with typhus and scarlet fevers. The following are his conclusions: Susceptibility to enteric fever decreases with age from the earliest years onward, though the decrease is slight between fifteen and twenty-five, whereas the risk of a fatal termination steadily increases with age. With regard to typhus, susceptibility is slight below five years of age, is at its maximum between ten and fifteen, and from this age onward steadily diminishes, though the risk of a fatal termination rapidly increases. In scarlet fever both susceptibility and mortality are greatest under five, and diminish with age. The mortality rises slightly after twenty-five, but the susceptibility does not.

THE BEST AND CHEAPEST CULTURE MEDIUM.—Irish moss, with one per cent. of cane sugar and two per cent. of beef peptone, is one of the best and cheapest culture media for micro-organisms, according to Dr. Alexander Edington, of Edinburgh. The mixture ought to do very well for invalids also.

RAW MUTTON CAN BE SAFELY EATEN, according to M. Chatin, of Paris, since it never contains parasites, at least in dangerous amount. It is a safer raw food, therefore, than beef or pork.

GONORRHŒA OF THE RECTUM is a frequent affection in Syria, from the fact that sodomy is about as general as prostitution.—*Cor. of Maryland Medical Journal.*

LAPAROTOMY FOR PURULENT PERITONITIS.—A case is reported by Dr. Studenski in the *Chirurgicheski Vestnik*, of a child, aged twelve, who was suffering from purulent peritonitis, arising in the course of typhoid fever. Aspiration was tried without any permanent relief. The abdomen was then opened by an incision in the linea alba, below the umbilicus, and exit was given to about six pints of pus. The peritoneal cavity was then washed out twice daily with a four per cent. solution of boracic acid in glycerine and water. At the end of six days the inflammation was limited to the neighborhood of the spleen, and the child eventually made a good recovery.

THE STATISTICS OF SUICIDE IN MEXICO.—According to some recently published statistics the number of reported suicides in Mexico, from 1860 to 1884, was 487. The greatest number occurred in the spring and the fewest in the winter. Only 64 of the total number were women; the youngest suicide was aged nine, the oldest eighty. The army furnished the greatest number, and prostitutes the least. Of the thirteen different classes into which the suicides were divided the medical profession came tenth on the list in point of frequency. Of the various causes mental aberration was the most prolific, alcoholism furnishing only 4 cases. Love impelled 65 to self-destruction, and 5 preferred death to the sufferings from incurable disease. Fire-arms were selected as the means of suicide in 288 cases. Of the nationalities the Mexicans furnished the largest contingent, then came the French, and after them the English residents. It is to be noted, however, that of the foreign residents during the period embraced by the statistics the French were by far the most numerous.

PECULIAR MUSCULAR POWER.—Under the name of "l'homme protée," a man in Paris has been attracting considerable attention by reason of the peculiar control which he has over his muscles. He is able to move separately not only special groups, but also individual muscles, in such a way as to produce the most grotesque contortions. He assumes at one time the appearance of a man suffering from the most marked tetanic convulsions; at another, the muscles of one limb are flaccid and seemingly paralyzed. It is said, also, that by contracting individual muscles very forcibly he is even able to almost entirely shut off the circulation in certain segments of the limbs.

HYDROFLUORIC ACID IN PHTHISIS.—Seiler treats pulmonary tuberculosis with daily inhalations of hydrofluoric acid. He passes air through a mixture of one part of hydrofluoric acid to three parts of water, and then drives this air, charged with the vapor of the acid, into a small room in which the patient sits. He claims to have obtained good results from this practice. The cough and dyspnœa are quieted, the night-sweats cease, the expectoration is lessened in quantity, refreshing sleep returns, the appetite is improved, and the patients gain in weight. These good effects become evident after from four to fifteen sittings.

HYDROPHOBIC INOCULATIONS IN NAPLES.—Professor Cantani has established a Pasteur institute in Naples, where preventive inoculations against rabies are practised. A number of persons have already been received and treated, and as yet no deaths have been reported.

THE CHOLERA COMMITTEE OF VENICE.—An association exists in Italy the object of which is to afford relief to individuals and communities in time of a cholera invasion. When it was announced last May that the cholera existed in Venice the members of the association met and appointed a committee whose duty it should be to care for the sick, and to endeavor, as far as possible, to prevent a spread of the disease. This committee visited all the sick poor, provided them with food and clean clothing, procured medical help and gave them medicine, watched with them when necessary, and attended personally to the cleansing and disinfection of their dwellings. Diet-kitchens were established, and a house was obtained where garments and bed-clothing were prepared. The appeals for pecuniary assistance were responded to very liberally, and the committee was never hampered for want of funds, even having a surplus of over two thousand lire when their labors were over. Too much praise cannot be given to this most charitable association for the truly noble work performed by its self-sacrificing members. To them it was undoubtedly in great measure due that the plague found comparatively so few victims.

HYGIENIC PRECAUTIONS DURING THE ERECTION OF A BUILDING.—A new chamber of commerce is about to be erected in Paris on the site of the old *halle aux blés*. As the latter was built in 1769, and the soil upon which it stands has not since been disturbed, some apprehension is felt as to the effect upon the health of the workmen of digging over the ground. Drs. Dujardin-Beaumetz and P. Richard have therefore presented a report to the Conseil d'Hygiène Publique upon the hygienic measures necessary to be observed during the demolition of the old building and the erection of the new one. They advise that the earth be freely sprinkled with antiseptic and disinfectant solutions, such as the salts of copper, iron, and zinc. Before the old walls are pulled down they should be thoroughly wet, so as to prevent, as far as possible, the rise of dust. The earth removed for the new foundations and the débris of the old building should be taken at once outside of the city. All the old privy vaults and subterranean passages should be cleaned out, dried, and disinfected with sulphurous acid. The building should be surrounded by a police cordon to prevent the approach of any persons not directly concerned in the work. Diet-kitchens should be provided in the immediate neighborhood, whence the workmen may obtain, at small cost, soup, wine, and hot coffee. The physicians living in the arrondissement are to be instructed to report at once to the proper authorities any case of typhoid or malarial fever occurring among the laborers. Finally, a commission is to be appointed to see that these measures are properly carried out, and to establish new regulations as emergency may arise.

HYSTERICAL SLEEP.—Greatly prolonged sleep is one of the rarer phenomena of hysteria and pertains to the category of hystero-epilepsy, in which sleep predominates over the convulsive symptoms. Charcot recently had a case in which sleep continued for fifty-four days, and was followed by two days of restlessness accompanied by hallucinations. There was no difficulty in feeding the patient, as reflex movements of deglutition occurred whenever anything was placed in the mouth. The urine and fæces were passed involuntarily. The patient awoke spontaneously and had no recollection of her long slumber.

THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS.—On the occasion of the recent annual meeting of this association the *Deutsche Medicinische Central-Zeitung* recalled the fact that the first meeting was held in 1828, under the presidency of Alexander von Humboldt, and among those present were Gauss, Metscherlich, Berzelius, and Dieffenbach. The number of members was then 458, and now it is about four thousand.

A SANITARIAN'S ARGUMENT AGAINST FREE-TRADE.—Dr. Weymott Tidy, of England, shows that while the population of England and Wales is steadily increasing, the agricultural products, owing to foreign competition, are diminishing, until England now only raises one-half its own food. Dr. Tidy claims it to be an unhealthy condition when a nation cannot maintain itself.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 30, No. 20 NEW YORK, NOVEMBER 13, 1886 Whole No. 836

Original Articles.

THE PRESENT STATUS OF BACTERIAL PATHOLOGY, AND ITS RELATION TO THERAPEUTICS.[1]

BY ALBERT N. BLODGETT, M.D.,

BOSTON.

To those who have made the progress of medicine a study during the past years, the observation of the changes which have occurred in the many departments of this most comprehensive science must have afforded material for much reflection, and no less for astonishment. In some avenues of medical research the entire conception of the facts on which our knowledge was supposed to rest has been reformed and extensively changed. New and distinct branches of special practice have been established; different modes of treatment have been introduced; and as the reason of these various changes, and the most important of all of them, is the fact that the great foundation of medical science—pathology—has recently assumed a degree of importance and practical interest never before attached to it. These changes commenced with the introduction of the more careful methods accompanying the perfection of the microscope, and its introduction and application to the study of the organic, or elementary, features associated with the various diseased processes.

Following this epoch in the recent history of medicine was a marked variation in the conception of the nature of the diseased conditions of the human system, and, with the sharpened acumen of genuine enthusiasm, hundreds of zealous laborers began their investigations in the enlightened realms of medicine. This era of the history of our profession was the period most calculated to bring out the highest and best which the knowledge and the experience of the past, and the newly discovered methods of study belonging to the present were able jointly to produce. It was the accumulation of these fortuitous conditions and the existence of these favorable surroundings which has given to us a host of those who have become illustrious in the recent annals of our science. With the results of the united labors of such an army of leaders have been associated a gradual variation in the methods of study, and in the views which obtain of the nature and character of the processes which are observed in the human body in that condition of the economy which is produced by the disturbance of its normal functions in the way of disease.

The general tendency of medical thought has been toward the discovery of some tangible *Wesen* of disease, something in the shape of a *materies morbi*, though in a sense somewhat different from that entertained by the earliest disciples of pathology, and consisting in a more precise study of the features of individual diseases, and the careful observation of their relations one toward another, which has made possible a more thorough analysis of the phenomena attending their course; and this has afforded the means for the acquirement of a greater degree of information and more extended knowledge than we formerly possessed, as to their origin, their nature, and their result upon the tissues and structures of the body.

The researches, carried on during many years by devoted workers in the paths of science, has had its reward in a long list of valuable discoveries, which have added much to the existing fund of knowledge, and have materially aided our labors for the relief of human suffering and the healing of disease.

Among the most important, as well as the most recent, advances in medical science must be classed the establishment, upon a firm and unshaken foundation, of the specific and infectious nature of a large class of diseases which were formerly supposed to occupy an entirely different position in their relation to the patient affected and to his surroundings. The group of maladies now considered was formerly believed, without exception, to depend upon some indefinable constitutional taint, or some predisposition of unknown character, or upon dyscrasia, or upon some other equally indefinite and unsatisfactory foundation. In all, or nearly all, of this large collection of morbid processes there has been found to exist a coincident development of a low form of organic life, of bacterial nature, which, it is claimed, is always present, in some definite and recognizable form, in each of the various diseases of this group.

The views here alluded to were first looked upon with some degree of doubt by the majority of practitioners; but the prolonged and careful observation of many competent men, of all countries and of undoubted integrity, has secured, even in the brief period which has elapsed since the new pathology was announced, a large and steadily increasing number of adherents, until there are now comparatively few physicians who hesitate to accept the bacterial origin of many of the severer forms of constitutional disease.

The value of the bacterial element in the production of the diseases above mentioned has been so thoroughly recognized that already, in most of the larger schools of medical instruction, the study of this department of medical science is encouraged by the establishment of courses in bacteriology, which are considered of great importance, ranking with those of many of the special branches embraced in the study of medicine. More than one renowned teacher has increased his former fame by the discovery of new and unknown organisms, belonging to the group of disease-producing germs, until the array of the recognized forms of bacteria has attained formidable if not terrifying proportions.

The conscientious medical practitioner is now expected to subject every secretion of the human frame to microscopic and chemical analysis; he must make cultures in doubtful cases, and propagate the successive products, and is taught to base his opinions, in diagnosis at least, largely on the results of the investigations so made.

In the present state of our science, and in view of the great importance which the new views of the pathological value of the germ-forms have attained, it is time that we ask ourselves the questions, which should be uppermost in the mind of every upright practitioner of the healing art, What has the discovery of the bacterial forms added to our knowledge of the treatment of disease? What has it done to increase our power of combating the processes which destroy life in these maladies? What has it done to enrich our means of preserving the health of those not affected, and to restore those already attacked with bacterial disorders?

[1] Read at the Annual Meeting of the Massachusetts Medical Society, June 8, 1886.

It is perhaps too early to perceive the entire bearing of this great question in all its relations upon the life and practice of the physician, as exemplified in his every-day rounds of ceaseless and wearing activity. The course of medical progress has ever been uneven, one theory or belief ever outstripping its neighbor, so that medicine is perhaps the most uneven and ill-balanced of all the sciences taught or studied by man. Each epoch of its history has presented the curious spectacle of an unequal preponderance of one or the other department of its great complexity of details, leaving a degree of nakedness in other directions which is both incongruous and unfortunate.

Thus, in our own day, the progress of the medical sciences has been unsymmetrical and irregular. The advances of histological research, both in the study of the normal as well as in that of pathological conditions, have been so rapid that other and no less important departments have been left far behind for the time being.

Thus, while we have been made acquainted with the sources and the nature of diseases to a degree never before approached, we have as yet realized no corresponding progress in the all-important department of therapeutics, nor, indeed, in the better rational treatment of the new conditions with which we have become familiar.

We know, indeed, much which was only a short time ago unknown; we have made certain majestic strides in the detection and classification of pathological conditions; and this is all to be valued at its true worth, and is an indication of the progress which should characterize our science; but, unfortunately, we do not yet know how to benefit our patients, except indirectly, by the utilization of the newly acquired information. Undoubtedly we are in a position to secure better results in the treatment of disease than formerly, but the improvement in this respect is as yet in no way commensurate with the augmented demands of medical science. We must with humiliation confess that the possibilities of our art have not been so enlarged as the demands of the position occupied by the medical profession to-day require. All will admit that thus far the advances which have followed as the result of the recent studies of germ-diseases have been principally in the direction of the better application of surgical measures, and the avoidance or the prevention of the accidents attending this great department of the healing art. Thus far the tendency has been toward the exercise of more uniform and thorough cleanliness in the practice of surgery. This has taken a definite form under the general outline of the antiseptic system of operation and treatment, and is only of benefit in that it establishes innocent surroundings, and aids the early healing of surgical lesions by mechanically or chemically preventing the access of the germs of septic processes.

The benefit of bacterial pathology has thus far, therefore, accrued to surgery rather than to medicine. The entire treatment of the so-called "germ-diseases" partakes thus far of the nature of antidotal rather than of curative character; it is preventive rather than therapeutic. The practical therapeutics of the group of bacterial diseases has not yet been developed.

The great defect in the present condition of medicine is the absence of an adequate form of general treatment for the conditions universally recognized as existing in the group of maladies known as "germ-diseases." Attempts have been made to supply the means of such treatment, but thus far they have been entirely unsatisfactory. We have tried to carry our medicines directly to the seat of the organism, the presence of which is recognized as the only sure indication of the disease; but we have no means at present of bringing the remedy into that relation with the germs which is necessary for its exterminating action. All the measures thus far advocated as curative in bacillary diseases are efficacious only by means of some action which requires the positive contact of the remedy with the organisms. This action is essentially of a mechanical or a chemical nature, and as such cannot take place without material contact of the agent employed with the body to be affected.

This is the one indispensable condition, and from the nature of the case the means which may be employed are much restricted. Many desirable agents are inapplicable to this purpose on account of their action on the human economy, by which its integrity might be injuriously affected. As yet we have no knowledge of a mode of treatment appropriate to the demands of the clinical conditions. We do not yet know an efficient germicide which it is safe to employ in the internal treatment of these diseases; that is, we have thus far no agent for the extermination of the disease-germs which is not also dangerous to the human system. *The ideal antiseptic* or *germicide is not yet in our possession.* We have not yet acquired the *best* which we have reason to expect in the way of medicinal treatment pertaining to this class of affections. The recent discoveries in therapeutical chemistry lead us to hope that a more suitable mode of combating the septic processes of the body will be discovered than we have yet become acquainted with.

The possibility of the cultivation of septic germs under conditions which insure the growth of the organism to a development similar to that which takes place in the body, gives to the experimental student the means of subjecting the germs to the action of various agents for their destruction, without being obliged to run the serious risk of injuring the human organism by the introduction of such agents into the animal economy. We have in this way been furnished with a number of efficient agents for the destruction of germ-life; but thus far no means has been discovered by which the tissues of the human body may be freed from the presence of these organisms, without, at the same time, being subjected to some dangerous action from the remedy employed. We may kill all forms of organic germ-life by means of sulphurous acid gas; but the human system would be also injured by the same means. We may subject the germs to the action of chlorine, with the certainty that they will inevitably be killed; but no animal organism can possibly endure the test. We may employ the solution of carbolic acid, or that of the mercuric bichloride, for the external treatment of wounds; but we always run a certain amount of danger, from the facility with which these powerful agents act as poisons to the system. We may combat some of the effects of certain bacterial forms by means of large doses of quinine; but we do not know how it acts, nor how to estimate its usefulness in septic diseases. We may employ the salicylates of the alkaline metals to diminish the virulence of some of the symptoms accompanying certain of the infective or other dangerous diseases, especially those which are supposed to be due to the formation of some pathological ferment in the animal system; but we often inaugurate a new train of symptoms scarcely less dangerous than those we seek to obviate, and are obliged to withhold the remedy.

In short, we possess absolutely no knowledge of any mode of treatment which corresponds with the demands of the advanced pathology of the present day, and we have but a scanty and unsatisfactory power of controlling the manifestations of disease, as revealed by our new light; so that the actual condition of medical science is not yet practically benefited by the great discoveries of the later years. We have as yet no adequate and safe means to obviate the effects of a known and recognizable cause; nor have the advances of pathological science thus far been of great advantage to the sick, except in indirect ways. We have, indeed, learned that the temperature of the surrounding media has a decided influence on the vitality of the various forms of germ-life, and we can experimentally control their activity in this way. The effects of certain atmospheric constituents has seemed to possess the power of diminishing the vitality of germinal forms, and to effect their extermination. The improvement of the general condition which is often realized in

high altitudes and in a rarefied atmosphere is doubtless effective in the destruction of low forms of bacterial life. The more wholesome ideas of personal hygiene, of the necessity of pure air in our houses, of the need of larger individual air-space in our hospitals, of the propriety of a more thorough isolation or seclusion of the sick, so as to diminish the chance of contamination of those yet healthy; the greater care in the treatment of known infectious diseases, such as scarlet fever, diphtheria, typhoid, and other disorders of the same class, cannot but be of the most salutary character. This is, however, all secondary in importance to the active and systematic treatment of an acute disorder.

The advantages thus far obtained must be classed as hygienic rather than medicinal. This knowledge, incomplete and defective as it is, is of inestimable value, as it has enabled us to perceive the direction in which our energies must be exerted to still further benefit the race in the diminution of infectious diseases. We can now better understand why the curative properties of a health-resort may deteriorate with the lapse of time and the populousness of visitors, if we conceive that the ground, water, and perhaps the atmosphere, may gradually become impregnated with the germs of pulmonary or other serious diseases. We can understand how that class of diseases called hereditary may be *communicated* from one generation to another; and how household and local epidemics may be originated and propagated. This is sufficient occasion for gratification; but it is not sufficient for the realization of the full benefit to be ultimately derived from bacterial pathology, and here, unfortunately, our knowledge reaches its present bounds.

If we take the germ of tubercle, as the most important member of the present known forms of bacilli, we find that the existing state of our knowledge is about as follows: We have in the bacillus tuberculosis a definite form of bacillary growth, which is found associated with the rational and physical signs of tuberculosis, and is believed to constitute the essential or specific element of this particular disease. In short, it is not too much to say that, according to the views of the most advanced pathologists of the day, the existence of the bacillus of tuberculosis alone constitutes tubercle, in distinction from other pathological growths or degenerations. This theory, I think I may say, is now fully accepted by all intelligent men, and I assent in full to its conditions. Before the discovery of this organism the subject of tubercular diseases had been a maze of speculation and uncertainty. In the light of the bacillary pathology this, and in connection with it many obscure points in the clinical history of allied diseases, are either explained or at least greatly simplified.

The radical fact, however, still exists, that all the researches in the bacillary origin of diseases have not yet led to any form of treatment for their relief which is in any way consonant with the importance of the case, or, in any adequate measure, meets its requirements. The existence of bacilli is still only a luxury in diagnosis, not an indication in the choice of treatment. The known existence of the bacillus tuberculosis has not, then, added any material benefit to the methods of treatment in that disease to what was known previous to its demonstration. There has, doubtless, great good come from the extensive researches to which the discovery of the various germs occurring in or accompanying the bacillary diseases have given rise; but thus far we have not attained the greatest and most valuable result—the indications for a better mode of treatment. The great value of bacillary examination, and the fatal import of their detection, have suffered a material and wholesome diminution from the repeated experience that patients with unquestioned bacillary development in their bodies have quite recovered from all symptoms of the bacillary disease, and have acquired good health again.

The greatest claim which has been advanced for the bacillus of tubercle therefore falls at once to the ground; for the chief importance which at first attached to the presence of this organism was as an aid to diagnosis, and a positive indication in prognosis in this affection. The bacillus has been proved to not only diminish, but to disappear entirely in cases in which it was undoubtedly present. The discovery of the bacillus was unquestionably an advantage for purposes of diagnosis, but the value to be derived from the detection of this organism was greatly overestimated.

The treatment which has thus far been advocated consists only in the extermination of these low forms of life, by means of the destroying action of some agent capable of annihilating them. The human organism is so delicate that many, and indeed most, of these means cannot be safely employed. The measures adopted to drive out the unwelcome guest would surely kill the unwilling host. We do not yet know how to bring our remedies into all the parts of the body in which it is desirable that they should operate in order to expel the organisms of disease. Thus we are left in nearly the same position as before the discovery of the bacillus, as to the cause and substance of the disease.

This is not, however, altogether true in regard to prophylaxis, and especially in relation to that element of treatment which may be generally denominated "hygiene." We have become acquainted with the character of a new organism, we have learned somewhat its habits, its mode of growth, its conditions of propagation, and we have ascertained some of the conditions under which these organisms will not thrive, or under which their development is hindered or quite prevented. Thus we know that a certain elevation of the temperature is essential to the development of certain disease-germs, and we at once conclude that if the temperature can be kept below the danger-point, the development of that particular germ may be prevented. We can thus account for the benefit accruing from removal to a favorable location, and this also in part explains how a particular place may become a sanitarium for persons afflicted with certain classes of disease. The amount of certain gaseous constituents of the atmosphere is thought to have a determining influence on the development and growth of certain forms of germ-life, and this may retard their spread in an organism in which they have already gained a foothold. They may be supposed to live a long time under unfavorable conditions, and thus we see the patients who are benefited by a temporary stay in a health-resort, on returning to their homes, immediately fall victims to renewed attacks of the old enemy. We may in this way also understand how a health-resort may deteriorate after a time, when the soil and air become impregnated with the constantly increasing amounts of the diseased material brought to it by large numbers of invalids, until the entire surroundings may become charged with the virus of disease, and the locality is no longer a health-resort. This much we may claim to have gained from the study of germ-pathology, and the value of this study none will deny; but our misfortune is, that this is *all* we know at present about the treatment of the tubercle bacillus or tuberculosis, in the present signification of the word; and all this we were accustomed to practically employ before the existence of the bacillus had been proved. We sent our patients to the same health-resorts before the demonstration of the bacillus that we now recommend, and we employed the same general treatment which we now prescribe, and we attained practically the same, or at least similar results. True, some enthusiastic practitioners have launched upon the profession a variety of methods for the exterminative treatment of all bacillary diseases, and we have the announcement of intra-pulmonary antiseptic injections, of various inhalations, and of a host of other attempts to hunt out the wily bacillus in its lair in the pulmonary parenchyma, or in other remote tissues of the body. We have methods recommended, and sometimes warranted, to permeate the residual air, and thus turn the interior of the lung into a reservoir of antiseptic vapors, but the proof

of the actual accomplishment of these objects is yet to be demonstrated. What is true of tuberculosis also holds good in regard to other bacterial disorders.

The most imperative need of the day in bacterial pathology is the discovery of some means whereby the germs which are proved to exist in certain diseases may be acted upon in the tissues of the body by some agent which may cause them to disappear, and at the same time the remedy should not injuriously affect the parts locally or the system at large. When we have the power to thus influence the development of germ-life, and can reach these organisms in the organs and structures of the animal body, we may hope to properly utilize the knowledge we now possess of the influence exerted upon the animal economy by the various forms of bacterial life.

It is, however, to synthetical chemistry that we must look for the fulfilment of this earnest hope. The resources of our present remedial measures are now known with a fair degree of accuracy, and it is not probable that we shall acquire the desired relief from any means at present in our possession.

The requirements of bacterial therapeutics are such that none of the known remedial means would serve the double purpose of destroying the bacteria and leaving the human organism uninjured. The character of the agents thus far known to possess the properties of a germicide are those of a chemical incompatibility, or of a corrosive or otherwise local and individual character. With all our knowledge, we yet know of no way to cause the disappearance of bacillary forms except by the actual and injurious contact of the remedy employed. This method of treatment is necessarily restricted to close range, and cannot be employed as treatment for the internal conditions arising from, or associated with, the development of bacillary diseases. It is not, however, necessary to give up the hope that the startling discoveries of the last years may not yet be crowned by the greatest of them all—the discovery of some means of safely combating the various bacillary organisms in the hidden and inaccessible recesses of the body. We need not yet take the gloomy view at present held by an eminent practitioner who recently stated that the discoveries of the bacillary forms constitute an interesting but profitless epoch in medical science, to which he gave no heed, except to regret it, inasmuch as it only serves to show our inability to consider medicine a satisfactory science, either in the way of successful study or logical research. He further stated that he should take no heed of the new pathology until he were furnished with some remedy which would exterminate the bacilli without at the same time killing the patient.

The diagnosis in questionable cases will doubtless sometimes depend on the presence or absence of the special bacillus. The praxis has already adopted this method of fortifying diagnosis. This in itself is a great benefit to the science of medicine; but it is to be hoped that other and more important benefits will accrue from the discovery of some means of eliminating the germs of disease, by which the severity of the malady may be mitigated. Judging from the results of experiments thus far made, there is not a favorable prospect of immediate success in the search for means to directly influence the development of pathogenic organisms in the living body of the patient.

All the greater importance is therefore to be laid on the prophylatic treatment of this class of diseases. This should consist, in part at least, in the careful destruction of the bacilli by the strenuous disinfection of all objects which have been in contact with the patient, or have been in any way soiled by the secretions or excretions from the disease. Measures should be also taken to protect healthy individuals from any contact with the emanations from the sick. Any measure of protection which does not insure the destruction of the bacilli is useless, as it fails to accomplish the only radical and necessary object of prophylaxis. The sick should not be permitted to mingle with those who are well, but should be secluded as far as practicable in the case.

To the *prevention* of bacterial disorders, therefore, rather than to their cure, should our present efforts be directed. We do not know how to affect either the progress of the disease or to cause its subsidence. We do know, however, in some degree, how to mitigate its severity, and we have learned that under favorable conditions we may sometimes hope to see the patient recover from all traces of the bacillary affection.

Let us trust that the efforts of the great number of arduous laborers in the domain of experimental pathology may yet be crowned by the discovery of the means of controlling germ development in the human body, and thus complete and finish one of the grandest labors in medical science which the world has ever looked upon.

When we possess the means of preventing bacterial growth and dissemination, we have the power to stem the spread of epidemic diseases which now so often fill nations and continents with terror. Cholera, tuberculosis, small-pox, diphtheria, and a host of other maladies will then be susceptible of rational and restrictive treatment, and the sum of human woes materially diminished. Surely nothing could be more attractive to the mind than the hope of achieving this priceless boon for humanity. From the triumphs of the past we may augur the future. We are able to confer the blessed gift of anæsthesia upon the agonies of operation or injury, and may we not hope that the earth is yet to be blessed with the means of controlling epidemics? The traditions of our science are full of examples which should give us renewed faith in its resources. We are now face to face with an unsolved problem of the greatest importance. Let us each endeavor to do what in us lies to aid in its solution.

THE TREATMENT OF CONSUMPTION BY INTRA-PULMONARY INJECTIONS—REPORT OF A CASE OF RECOVERY.[1]

By JOHN BLAKE WHITE, M.D.,

FELLOW OF THE NEW YORK ACADEMY OF MEDICINE; VISITING PHYSICIAN CHARITY HOSPITAL, ETC.

Local applications are naturally regarded efficacious in all forms of structural diseases whenever they can be practised.

In respect to the lungs, the experiments which have been made of late years not only demonstrate conclusively the practicability of local medication in diseased conditions of these organs, but also that decided benefit oftentimes results from such treatment. I need not comment upon the unsatisfactory effects of the methods of treatment at our disposal in the past, for the relief of patients suffering from phthisis, for, alas! the mortality reports speak more eloquently than words, affording too frequent and far too numerous examples of the destructive march of this justly dreaded destroyer of human life, as well as the impotency of our noble art to arrest its progress.

In November, 1885, I instituted a judicious trial of intra-pulmonary injections in some cases of advanced consumption while on duty as visiting physician to the Charity Hospital, where a large number of such cases were congregated. After a careful observation of the results of these injections I reported my experiments in The Medical Record, May 22, 1886. Among the cases at the time was a private patient of my friend Dr. Ira B. Read, who has kept the case under observation since the treatment was commenced to the present time, and who, I have no doubt, will corroborate what I shall say concerning the benefit which has followed the treatment. So far as the method is concerned, I can assure

[1] Read before the Yorkville Medical Society, September 30, 1886.

you that my confidence in it increases with my experience, and the results compel me to accord to it an established position among the legitimate means at our command of battling against this formidable foe.

The cough, expectoration, and local soreness about the cavity were remarkably controlled by the intra-pulmonary injections. The debilitating night-sweats were always checked, while the patients undeniably improved in flesh and strength during the continuance of the treatment. When much dyspnœa was experienced the injections exercised a soothing influence upon the respiratory centres, while the appetite invariably received a material stimulus.

The physical condition of the cavity is changed; the walls become dry; the secretion is greatly lessened. In place of the loud, gurgling crepitation there is heard the large crepitation, which in turn is replaced by finer crepitation, until, after several administrations of the carbolized iodine by intra-pulmonary injection, all moist râles disappear, and a pronounced "click" is detected. I regard the presence of the "click" a favorable indication, for it is only present when the necrotic process has been arrested, and denotes a marked tendency to inspissation of the cavity.

In the case herewith reported this "click" was very noticeable after the fifth intra-pulmonary injection, and a dry, cavernous sound in both expiration and inspiration was present later.

The injections have been usually administered once each week, and I have found that the lung manifested a greater degree of tolerance when the intervals were not prolonged and the operation was regularly performed. Some patients cough considerably after the first pulmonary injections, who manifest no irritation whatever after subsequent operations. The respiration usually becomes more easy and regular, while all the most troublesome symptoms are soon relieved.

I have been frequently asked what I expected to accomplish by this method of treatment, and my reply has been, *both local and general improvement.*

I look for such a modification of the condition of the cavity itself as will tend to arrest the formation of pus and encourage its cicatrization and contraction.

Some eminent authorities object that cavities do not contract, but my experience in this particular satisfies me that such does take place. The resistance which the needle encounters on entering the lung, after several injections have been practised, cannot be solely due to the development of fibro-cellular tissue as a result of the treatment, but is, in part at least, occasioned by condensed tissue, the result of cicatrization with contraction. The auscultatory and percussion sounds also denote when contraction has taken place. The resonance on percussion is less diffused over contracted cavities, and is easily demonstrated.

A prominent physician interested in this method of treatment of phthisis did not see how the pus in the cavity was disposed of, though he thought it might prevent the further formation of pus. Fortunately, nature provides the means of ridding the cavity of exuded pus by cough and expectoration, both of which cease when there is no longer cause for either.

When carbolized iodine is used for intra-cavernous injections, I expect, by the well-known influence of iodine, to disinfect the cavity and exert within it a remedial, alterative, and resolvent effect.

Taken internally, it is said to excite the appetite and give tone to the digestion; but as it irritates the stomach it cannot ordinarily be taken in this way. Introduced into the system by intra-pulmonary injections, its good effects are all realized, and without the least risk of disturbing the digestive functions. Iodine sometimes exercises a remarkable emmenagogue effect, hence its great value in phthisis is not infrequently realized by restoring the uterine functions in young female consumptives, who always suffer from amenorrhœa. The sooner intra-pulmonary injections can be administered in such cases after apicial softening has positively taken place, the greater will be the probability of a return of menstruation, and an improvement of the lung condition proportionately increased.

The method which I have adopted of administering the lung injections is the following: If the patient is much debilitated, a stimulant is administered at least fifteen minutes before the operation. He is then directed to assume the recumbent position, with the head and shoulders slightly raised, and resting upon a hard bolster or pillow. This position is preferred to the sitting posture, as a better resistance is afforded posteriorly, and the patient cannot avoid the thrust of the needle as easily as the sitting posture would permit. Such an attempt on the part of the patient would be difficult to resist, and its execution might cause the operator to introduce the needle in a different place from that intended, if it did not materially embarrass its skilful and painless entrance into the diseased portion of the lung.

The syringe and needle should both be carefully cleansed with a solution of carbolic acid, and the pulmonary fluid warmed to at least one hundred degrees Fahrenheit.

After determining by careful auscultation and percussion the depth to which the needle should be inserted to reach the cavity, the little rubber guard, which is a useful adjustment to the needles made by Tiemann & Co., is set for the purpose of indicating and regulating the depth of penetration required. The patient is then directed to turn the head and face to the side opposite the one to be operated on, and to take two or three deep inspirations slowly; at the second or third inspiration, when the lung is well inflated, the needle, with syringe attached, is pushed through the intercostal space selected, with a quick, firm pressure, at right angles with the chest-wall, until the depth of penetration in accordance with the fixed rubber guide is attained. The fluid in the syringe is then slowly injected, and the needle quickly withdrawn. A small piece of adhesive plaster is placed usually over the external puncture, though it is not abolutely necessary. A knowledge of the relation of the first rib to the clavicle, and its direction, is necessary to avoid striking it with the needle. The first or second intercostal space, anteriorly, is generally selected, in accordance with the size and location of the cavity, and the point of penetration of the needle is usually in the nipple line or to its outer border.

If the needle is inserted within the nipple line, or too near the border of the sternum, there is danger of wounding some branch of the intercostal or internal mammary vessels and nerves. This precaution is more necessary on the right side than on the left, by reason of slight difference of distribution of these several vessels and nerves. Furthermore, in order to avoid the danger of shock, paroxysmal coughing, or hemorrhage, the fluid should be slowly injected.

On no account should the needle be inserted between the clavicle and first rib, as there would be danger of wounding the subclavian vessels, and on the left side the thoracic duct in addition.

Although I have always observed the strictest care when operating on the right side, it has been sometimes impossible to avoid troublesome paroxysmal cough, dyspnœa, and fibrinous expectoration. In one case cyanosis, with unilateral spasm, succeeded the operation on the right side, and, though apparently serious for a short time, nevertheless gradually abated without further trouble after several inhalations of a few drops of chloroform. I have not observed such phenomena when the injection has been confined to the left pulmonary apex, and I believe the chances of such occurrences would be lessened by inserting the needle a little outside the nipple line when operating on the right side. Should severe paroxysms of cough follow the operation at any time, and tend to be prolonged, I would advise the administration of a few

drops of chloroform by inhalation, which will generally suffice to arrest the paroxysm.

I have used and found beneficial the inhalation of steam, medicated with a drachm or two of laudanum. Such treatment, however, is rarely required. It has only been necessary to resort to some such measure with two patients, both of whom manifested serious laryngeal complications, the presence of which alone seemed to excite and aggravate coughing. Every care should be exercised to avoid the superficial veins, and approximate as much as possible the lower border of the intercostal space, as the artery, you will remember, courses along the lower inner border of the rib.

For twelve or twenty-four hours after each pulmonary injection the patient should be kept in bed, free from all excitement, as any undue exertion of either a mental or physical character would tend to increase the force of the circulation and possibly precipitate hemorrhage.

I know that the operation has been performed and the patient permitted to walk home, but I feel obliged to advise against such practice.

An understanding as to what takes place at the point of puncture in the lung substance is clearly explained by the experiments of Eugene Frankel (*Deutsche Medicin. Wochenschrift*, 1882, No. 4, p. 51) upon rabbits, and to which my attention was kindly called by my friend Dr. Edward Frankel, of this city. Solutions were employed of tartrate of alumina, two to five per cent.; carbolic acid, one to five per cent.; boracic acid, four per cent.; iodoform, five per cent. The above solutions were made with the finely triturated substances in olive oil, and parenchymatous injections of one gramme per dose, once to six times daily, administered.

He states that no especial reaction was manifested on the part of the animals; in a few of the cases there was slight cough during the injections.

The autopsies revealed a circumscribed croupous bronchitis. At later periods the pathological changes due to the trauma in the lungs consisted of slight hemorrhages into the pulmonary parenchyma, but confined to the point of puncture and its immediate neighborhood, which undergo the customary changes, with pigmentary deposit, and finally disappear entirely. There were also disseminated deposits, varying in size from a hemp-seed to a cherry-pit, situated sometimes on the surface, at others in the deeper layers of the parenchyma.

These deposits are at first of a blackish- or brownish-red color, and at a later period assume a reddish-gray or pale grayish-yellow color. When iodoform had been injected the deposits were of a sulphurous yellow hue.

On microscopic examination they presented a massive desquamation of alveolar epithelium. These deposits, he further says, disappear either by absorption or cicatrices of about a millimetre in thickness, in which loose connective tissue replaces the pulmonary parenchyma at the end of six weeks after the injection. Such important changes occurring, the advisability of keeping the patient quiet after each intra-pulmonary injection, for at least a few hours, will be apparent to you all.

Frankel remarked as a result of his experiments that he believed the human pulmonary substance would prove receptive of antiseptic injections, the technical difficulties of the operation being slight.

He thinks the injections might be practised with benefit in catarrhs of the apex or apex infiltrations, and in certain cases of putrid bronchitis or pulmonary gangrene.

My practice is to commence with ten or fifteen minims of the carbolized iodine solution, and increase the amount five minims each week until forty minims are reached, which are then injected weekly or fortnightly, as the exigencies of the case require, until local indications for continuance of the treatment are no longer present.

While the patient is under this treatment we should not lose sight of the necessity for such general remedies as are known to promote digestion and assimilation, as well as tend to help store up fat. Disagreeable dosing, as well as too much dosing, should be studiously avoided.

An example of the value of intra-pulmonary injections is afforded by the following case of long-standing consumption: The patient presented, without exaggeration, a hopeless condition of the left lung when intra-pulmonary treatment was commenced. I have no doubt that without the benefit afforded by this method of treatment she would have rapidly declined. Dr. Read, whose patient she was, and Dr. Morrill, who visited the patient with us on several occasions, will undoubtedly corroborate what I have said.

A better idea can be obtained of the patient's condition, and the result of the treatment, if I give you a detailed history of the case, with the notes which I took concerning the patient's progress while under treatment.

Mrs. K——, patient of Dr. Ira B. Read, aged forty-five, married. The mother of several children, most of whom are living. Gives no family history of phthisis. On March 11, 1879, she swallowed a fragment of bone, which lodged, she thinks, in the œsophagus. Many attempts were made to dislodge the bone, without avail, when the services of a physician were sought. He attempted to push it down with a spoon, but after unsuccessful trials to remove it, finally abandoned further efforts to do so. A short time after this she began to experience severe pain in the throat, on the left side, and slight cough supervened.

Another physician was consulted, who, after three months' treatment, gave up the case as hopeless, but advised her to take cod-liver oil, which she did.

In the meantime she experienced great general debility, was troubled with night-sweats, persistent cough, and began to expectorate blood. About July, 1880, she consulted a third physician, under whose advisement she improved, until the following winter, when she was again troubled with night-sweats and hæmoptysis.

These symptoms after a while ameliorated, but again returned during 1882. In April of this year, after a severe paroxysm of coughing, she dislodged and expectorated the piece of bone. I will herewith exhibit the fragment, and you will see that from its size and shape it probably never lodged below the glottis. It is too large a fragment to have passed beyond the rima glottidis.

After this she continued to be alternately better and worse until the spring of 1884. At this time her physician discontinued his visits, and informed her husband that she could not possibly survive but a short time. She then called in Dr. Read, under whose care she remained up to the present time. Dr. Read advised her to test the value of intra-pulmonary injections as the only remaining chance of saving her life. This she consented to do, and resulted in my visiting the patient, with Drs. Read and Morrill, May 1, 1886.

For the past five years she had been coughing incessantly, and the expectoration increasing. At the time of our first visit she complained of severe pain in the throat and upper portion of left lung, for relief of which she had become accustomed to take large doses of morphine. Her expectoration amounted to sixteen ounces in twenty-four hours, and was of a dirty green color and fetid odor. She was having regular profuse night-sweats, which were partly controlled by atropine. Emaciation was manifest, and her finger-nails presented the characteristic clubbed appearance so generally observed in consumptive patients. A large cavity was easily made out in the upper part of left lung, where auscultation revealed loud gurgling crepitation. Infra-clavicular flattening was very marked over left apex. The syringe and needle having been, as usual, rendered aseptic, I injected twenty minims of carbolized iodine, previously warmed to 100° F., into the upper part of the cavity, through the second left intercostal space, on a line with the nipple. The operation was followed by no cough or expectoration, and the

patient complained of no pain or irritation whatever. The respirations were as regular and steady as was possible under the circumstances, and the pulse evidenced slight excitement for a short time only.

May 5th.—The following was received from Dr. Read: "Our patient is doing well. She has coughed but very little, and raised but little. She did not sweat any for two nights. She feels very hopeful and does not dread our visit next Saturday. I sincerely trust she may be permanently benefited." I quote Dr. Read's letter that the very satisfactory character of the report may not be attributed to my enthusiasm and confidence in the treatment. I ask you to note the marked and immediate improvement so short a time after the very first injection.

May 8th.—Visited patient with Drs. Read and Morrill. Her general condition appeared much improved. She seemed cheerful and hopeful. Her tongue was naturally clean and moist. Voice clear and stronger. Temperature, sublingual, 99.5°; pulse, 90; respiration, 20.

Patient declared that since the last in ection she has taken out-door exercise with ease and felt benefit therefrom. Feels much more inclination to exercise than she did. The expectoration has been decidedly lessened, and the sputa is far more viscid in character.

Upon auscultation the loud, moist crepitation was found less pronounced, the cavity presented indications of cicatrization, and superiorly the walls were dry and hardened. At the dependent portion of the cavity the gurgling râles were materially lessened, clearly demonstrating that expectoration had removed most of the purulent exudation, while the injections had arrested the suppurative process. Respiration was easy and regular in the portions of the lung surrounding the excavation. Thirty minims of carbolized iodine were again injected into the cavity, a little to the left of the previous point of insertion, and was not followed by any cough or other evidence of irritation whatever. No soreness or pain of any sort was complained of, and there was no expectoration or cough up to the time of our departure. The first and second injections were exceedingly satisfactory in the perfect freedom from any evidence of local irritation.

May 13th, A.M.—I received a note from Dr. Read as follows: "Our patient is doing well beyond expectation. Better appetite and spirits. I think she feels very hopeful." 4.30 P.M., Dr. Morrill and I met Dr. Read, according to appointment, and we found the patient in a very cheerful mood. She stated that she has had no night-sweat since May 8th. Has been exercising outdoors every day that the weather permitted, and without feeling fatigued in consequence. She says she feels stronger. Coughs very little, and expectoration does not exceed two ounces in twenty-four hours, while it is more consistent in character. Her appetite has greatly improved. Has had a fancy for meat, which she ate with relish, though prior to the intra-pulmonary injections she decidedly disliked animal food.

On auscultation the gurgling crepitation had ceased. Moist râles were heard at left apex, but less distinctly and less diffused. The patient's general condition presented undoubted evidences of improvement. Her skin felt less relaxed and manifested more natural firmness and temperature. Her respirations were regular and performed without pain.

The third injection of thirty minims of carbolized iodine was administered in the first intercostal space, on a line with the left nipple. A slight oozing of blood occurred externally when the needle was withdrawn, but was immediately checked by digital pressure. This was doubtless from some superficial vessel. The injection was followed by no cough, pain, nor evidence of irritation whatever.

Tuesday, May 18th.—Dr. Read wrote me that he had seen Mrs. K—— in the morning, and stated that steady improvement continued. "Very little cough or expectoration since last injection. Scarcely any râles detected. None of a coarse nature. Appetite fair. Walked four blocks and back yesterday. She feels much better, and I am encouraged." This report was penned the fourth day after the third injection, and the seventeenth day of treatment.

Friday, May 21st, P.M.—Visited patient with Drs. Read and Morrill, and found her out walking. She said she seldom coughed. We were struck with her strength and energy. Instead of the pale, emaciated features she once presented, her complexion was of a more healthy hue, and expression cheerful. Her expectoration is reduced to one ounce in twenty-four hours. No gurgling crepitation heard on auscultation, but in the place of it a dry, cavernous sound. Has had no return of night-sweats since May 8th, and sleeps well. Appetite continues good. Still takes regular out-door exercise without fatigue. Has not felt the least ill effect from the intra-pulmonary injections, but, on the contrary, declares that she is sensible of acquired strength since the very first injection was administered.

The patient having been fortified with a stimulant, as usual, and the pulmonary fluid warmed, thirty minims were injected through the first intercostal space, a little outside the nipple line. No cough followed, and no pain nor soreness was felt. Up to the time of our departure the patient had neither coughed nor expectorated since the injection was administered.

May 28th.—I met Dr. Read according to appointment. We found the patient out walking. She still manifested decided evidences of improved health. She assured us that she very seldom coughed; that her appetite continued good; that she felt better; had had no night-sweats, and very little expectoration. The sputa is less purulent and more mucoid in appearance. Over the site of the cavity a sharp "click" was heard on auscultation; not, however, with every act of inspiration.

The patient has so materially improved, and the physical condition of the cavity so much altered for the better, a continuance of weekly injections is not deemed necessary after this.

Injected thirty minims of the carbolized iodine through second intercostal space, and resulted in no cough or other evidence of irritation whatever. This constituted the fifth injection.

Both Dr. Read and I were impressed with the amount of chest expansion with each inspiration on the affected side. The respiratory murmur was somewhat restored over left apex, and tubular breathing established directly over the site of the cavity. This, together with the percussion notes obtained, I regarded as evidences of cicatrization and contraction of the cavity.

A very important result of the intra-pulmonary injections was the absence of fetor about the sputa, which condition was especially observed on the occasion of my first visit.

On June 2d Dr. Read wrote that he saw Mrs. K——, Sunday, May 30th, and also June 2d, on which two occasions she appeared in good health and spirits. She had very little cough, and only expectorated about two drachms of thick, viscid mucus.

June 11th, Dr. Read wrote: "Mrs. K—— is very much better; scarcely any cough or expectoration; there is a slight increase of mucous râles, and I think it would be best to administer another pulmonary injection. The patient has been to my office once, and down town on the elevated road once."

June 14, 1886.—Visited Mrs. K——with Drs. Read and Morrill. To describe the patient's condition would be but a repetition of what has already been said on the subject. Her progress toward health has been surprisingly rapid and sure. Although it is sixteen days since last injection, she has little cough and very little expectoration. Upon auscultation the respiration over the affected lung-space indicated remarkable improvement. Some more râles were observed than at last examination, but were less loud and diffused than formerly. There ap-

peared to be good expansion on the affected side, and she said she felt no soreness in the upper part of the lung. The pain in the throat and at apex of left lung, which used to be exceedingly severe, and for relief of which she took large doses of morphine regularly, has not returned since the intra-pulmonary injections were commenced, and she has altogether given up taking morphine.

The sixth intra-pulmonary injection was administered, of thirty minims of the carbolized iodine, and was not followed by pain, cough, or irritation of any sort. The patient assured us that she felt conscious of improvement and had little doubt of her ultimate recovery. She said, moreover, that she would submit to the treatment as long as it was deemed necessary for her to do so.

June 24th.—I administered the seventh intra-pulmonary injection of thirty-five minims of carbolized iodine. Drs. Read, J. L. Morrill, and W. T. Alexander were present. The patient's general improvement has continued. She now coughs very seldom, without expectoration. Some mucous râles were heard on auscultation over posterior aspect of left lung. Superiorly, respiratory murmur remarkably clear and almost wholly restored. The tubular breathing over apex, anteriorly, much modified. Percussion note muffled somewhat, but of good quality. No cough or other distufbance followed this injection.

July 10th.—Visited Mrs. K—— with Drs. Read and Morrill. On auscultation heard no râles whatever over affected lung, either anteriorly or posteriorly. A dry murmur was heard over region of former excavation upon expiration and inspiration, and an occasional "click" discerned. The lung capacity and chest expansion appeared admirable. The patient informed us that she had weighed herself two weeks after the treatment was begun, and in the succeeding six weeks had gained four pounds. Her appetite still continues excellent, and she feels inclined to exercise daily. I administered the eighth intra-pulmonary injection of thirty-five minims of carbolized iodine without exciting any cough or other noticeable reaction.

The physical condition of the patient's lung having assumed so nearly its healthy normal state, the injections are deemed no longer necessary, unless there should arise some future requirement for their administration. The patient bade us adieu with warm expressions of gratitude for what had been accomplished. At the request of Dr. Read, while absent from town, I visited Mrs. K——.

August 18th.—I examined her chest very critically, and on auscultation failed to detect any râles whatever. Respiratory murmur remarkably clear over former diseased lung, and with the exception of a barely perceptible prolonged expiration, and slight, coarse murmur, there were no other abnormal sounds heard. There was, of course, a modified percussion sound, but the amount of dulness was so slight as to surprise me. The cavity had undoubtedly entirely cicatrized and contracted, so that the tubular breathing which was present in July had entirely given way to a somewhat exaggerated expression of the normal respiratory murmur. The patient expressed her belief in the permanency of her recovery, and assured me that she had been for some time entirely free from cough, expectoration, or night-sweats.

Dr. Read wrote me, under date of September 14th, that his patient continued well, "with absolutely no return of cough or expectoration."

The last intra-pulmonary injection was administered July 10th, since which time she has been entirely free from cough, expectoration, or night-sweats, and I am therefore, I think, justified in believing her recovery likely to prove permanent.

The history of the case from the very first injection has been characterized by the patient's steady and gradual improvement. Furthermore, we cannot fail to be impressed with the wonderful power exercised by the intra-pulmonary injections in arresting pulmonary disintegration, which in this case was rapidly extending.

These, gentlemen, are the clinical facts as regards intra-pulmonary injections, and I now leave you to judge whether such results are not sufficient to warrant the confidence which I entertain for this method of treating phthisis pulmonalis.

941 Madison Avenue.

CEREBRAL ANÆMIA—ITS CLINICAL MANIFESTATIONS, PATHOLOGY, AND TREATMENT.

By J. LEONARD CORNING, M.D.,

New York

Consultant in Nervous Diseases to St. Francis Hospital, Jersey City, etc.

Historical.—Although some of the older writers were more or less familiar with the symptoms induced by sudden hemorrhage, it was not until the advent of the writings of Marshall Hall[1] that the idiopathic form of the affection was accurately described. Besides this he showed conclusively that many of the symptoms, at that time commonly ascribed to hyperæmic conditions, were in reality due to anæmia of the brain, being identical in every essential respect with the phenomena observed after severe hemorrhage. A similar explanation of *apoplexia exinanitione* was given by Abercrombie about the same time.

Sir Astley Cooper's[2] observations concerning the effects of ligature of the carotids undoubtedly served to give more scientific shape to the current pathological opinions of the day; but it was not till the experimental researches of Kussmaul and Tenner, and numerous others, had been published that the pathogenesis of the affection can be said to have been substantially advanced.

Experimental data.—When pressure is applied to the carotids of an otherwise healthy individual the following phenomena are observed: The face becomes pale, the eyelids droop, respiration and the heart-beat are gradually retarded, and eventually, if pressure be sufficiently long-continued, a well-marked soporific tendency is apparent.[3] If the degree of pressure be very severe and sudden complete unconsciousness and syncope are induced. During the continuance of the local depletion sensibility is diminished, the tactile sense is impaired, and an examination with the dynamometer shows that the muscular power of the hands is sensibly diminished. At the same time the subject complains of weakness in the knees, and attempts at walking are accompanied by staggering and vertigo. Schiff has shown, and Stone had occasion to confirm this observation, that when the compression is so great as to cause almost entire occlusion of the arteries, severe convulsions may be induced.

When the circulation in both vertebral and carotid arteries is interrupted, the pupils dilate, the eyeballs roll upward, the masseter muscles are violently contracted, and the respiration becomes slow and finally ceases altogether. At the same time the entire muscular system is thrown into a state of violent convulsions, and death ensues. It is an interesting and significant fact, however, that if artificial respiration be maintained, an animal may be kept alive for a considerable length of time, though as far as motion and sensation are concerned life is extinct. Moreover, when the ligatures about the vertebrals are removed, respiration is again restored.

All the phenomena are enhanced when moderate compression of the arteries is combined with galvanization of sympathetic and pneumogastric nerves, as I was the first

[1] Lectures on the Nervous System and its Diseases. By Marshall Hall. London, 1836. Also, Observations on Blood-letting. London, 1836.

[2] Account of the first successful operation performed on the common carotid artery for aneurism, in 1806, with the post-mortem examination in 1821. Guy's Hospital Reports, vol. i., 1836.

[3] Vide the experiments of Dr. Alexander Fleming. British and Foreign Medico-Chirurgical Review, 1855. Hammond: Sleep and its Derangements, Philadelphia, 1869. Corning, J. Leonard: Sleep, the New York Medical Record, July, 1882. Also, Prolonged Instrumental Compression of the Carotids as a Therapeutic Agent, Medical Record, February 18, 1882; and Physiological Brain Rest, a paper read before the New York Neurological Society, June 6, 1882, and published in the Philadelphia News, June 17, 1882.

to point out and practically utilize in the treatment of functional cerebral affections.[1]

As some writers have imagined that the pressure exercised upon the jugular vein and pneumograstric nerve, which is an almost unavoidable concomitant of severe compression of the carotids, may have had something to do with the evolution of the phenomena above referred to, I determined to set the matter at rest, if possible, by resorting to other methods of depletion than arterial pressure.

Accordingly, I had constructed by the Messrs. Rheinders & Co., of this city, an apparatus on the principle advocated by Junod, which encircles both the lower extremities, and is secured by an air-tight india-rubber belt about the loins. By means of an appropriately constructed air-pump, it is possible to cause a partial vacuum in this apparatus. When the pressure is thus diminished around the extremities, the vessels of the latter become engorged with blood, and the brain, in company with the viscera of the thorax and abdomen, is greatly depleted. Under these circumstances I have been able to reproduce all the symptoms obtainable by compression of the carotids,[2] thus eliminating all sources of error and confirming the results obtained by myself and previous observers.

Finally, I cannot refrain from referring to the important experimental researches of Jorschovsky[3] with reference to effects exercised by loss of blood upon the irritability of the cortex. This observer found that when an animal is deprived of about one-seventh of the entire quantity of blood, no pronounced change in the irritability of the cortex takes place. When, however, the quantity eliminated amounts to about one-fifth of the whole amount, the irritability is much augmented. But, on the other hand, when from three-fifths to two-thirds of the entire amount are withdrawn from the circulation, diminution and ultimate abolition of cortical irritability are observed.

Pathology.—Where cerebral anæmia exists, the vessels of the pia are partially or entirely empty, and the meninges have a pale transparent appearance. The cerebral tissues also present unmistakable evidence of malnutrition. Upon section the small drops of blood, which under normal circumstances are met with in abundance, are scanty or entirely absent. At the same time a copious exudation of serum takes place from the pia and ventricles, proving conclusively—if we accept current physiological opinions concerning the functions of the perivascular lymph—that the vessels have been in a condition of more or less contraction during life.

It is clear that where cerebral tumors, thrombosis, or embolism is present, the anæmia will be more or less circumscribed in character, whereas in conditions of general inanition all the organs within the cranium are liable to be affected.

If the experiments of Jorschovsky be accepted, it is easy to understand why some cases of cerebral anæmia exhibit phenomena of irritation, others again those of depression, and yet others somnolence and even coma.

Causation.—Cerebral anæmia may be local in character or may affect the entire brain, as well as the superior portion of the cord.

The causes which give rise to cerebral anæmia are those which tend to diminish the entire amount of blood in the organism, and those which are expressed in disorders of the vaso-motor mechanism.

To the first category belong hemorrhage and chlorosis. When an individual has lost a large quantity of blood, either from traumatic, pulmonary, or uterine hemorrhage, the sudden abstraction of so large a portion of the vital fluid causes a lowering of arterial tension. At no portion of the entire economy are the effects of this reduced tension more evident than in the organs enclosed within the cranium. The vertigo, confusion of mind, and somnolence so often witnessed after parturition and severe epistaxis are, in fact, the direct result of cerebral anæmia.

When, on the other hand, the reduction of the amount of blood within the economy is more gradual, as in certain chronic wasting diseases, the cerebral disturbances, though well marked, are less rapidly developed, and are usually less intense in character.

The vaso-motor disturbances which express themselves in anæmia of the intra-cranial organs are often, though not invariably, associated with more or less exhaustion of the higher centres. They are also found in conjunction with a warm and moist condition of the extremities, and with a generally debilitated state of the organism at large.

Symptoms.—It is evident that the character of the symptoms will depend greatly upon the cause which gives rise to the anæmia. Where the latter is developed rapidly, as the result of sudden hemorrhage or mental shock, facial pallor, ptosis, vertigo, tinnitus, mydriasis, and syncope are almost instantly produced (acute cerebral anæmia). In a large number of cases, however, the phenomena of the affection are gradually developed, owing to the insidious nature of the processes which lie at the root of the disease. Without entering further upon a discussion of the latter, it will be well to give at once a general description of the symptoms observed in gradually developed (chronic) anæmia of the higher cerebral centres.

When the amount of blood circulating within the brain is progressively diminished, the first symptom usually observed is an unusual degree of mental irritability, accompanied by marked physical and mental inertia. At the same time there is more or less depression and drowsiness, especially during the early morning hours; while toward evening there is a temporary revival of physical, and especially mental, activity. All efforts at systematic mental effort are, however, of short duration, and attempts at even moderate physical exercise are followed by vertigo, inordinate fatigue, and depression. The sleep function also exhibits marked derangements. Sometimes the subject is restless and more or less irritable during the early hours of the night, and is unable to obtain sleep till long after midnight. At others he is tormented by disagreeable dreams, or even severe nightmare, and awakes in an irritable and torpid condition, which totally unfits him for the routine duties of the day. As the anæmia becomes more pronounced, the cerebral symptoms increase in severity. Attempts to rise from the recumbent posture are followed by vertigo and even syncope, the dizziness being especially marked when the stomach is empty and the intestines but partially distended. Hence all attempts at exertion before breakfast are usually followed by nausea and fainting. Headaches, described as "heavy," "dull," "profound," and "vague" in character are of frequent occurrence. The location of these pains is sometimes difficult of determination, but in many cases they are decidedly circumscribed in character, being confined to the occipital, vertical, or parietal regions. They are usually much relieved, or even temporarily entirely abolished, by resort to the recumbent posture, or by the administration of alcohol, or the inhalation of the nitrate of amyl. The application of Esmarch's bandages to the lower extremities usually affords immediate relief.

Not a few practitioners are in the habit of regarding all headaches as indications of irritation or congestion, and, as a result of these crude pathological conceptions, an indiscriminate resort is had to dry cups, leeches, and even bleeding. It can readily be imagined that where well-marked anæmia of the higher centres is present, such expedients can only serve to materially aggravate the morbid accidents already existing, and under certain

[1] Electrization of the Sympathetic and Pneumogastric Nerves, with Simultaneous Bilateral Compression of the Carotids, by J. Leonard Corning, M.D., New York Medical Journal for February 23, 1884. See also: Brain Rest, being a Disquisition on the Curative Properties of Prolonged Sleep, by J. Leonard Corning, M.D. G. P. Putnam's Sons, New York. Second Edition, 1885.

[2] Carotid Compression, by J. Leonard Corning, M.D. Anson D. F. Randolph & Co., New York. 1882.

[3] Über der Einfluss der Anæmie auf die elektrische Erregbarkeit des Grosshirns nach Versuchen von Herrn Jorschovsky aus Petersburg. Munk in Du Bois Reymond's Arch. für Physiologie, 1853, p. 125.

circumstances they may even prove decidedly dangerous. As a rule, both pupils are more or less dilated, but in some cases only the pupil of one side is affected.[1]

Most patients who have suffered for a considerable length of time from cerebral anæmia evince unusual susceptibility to sensory impressions, particularly to those of light and sound. The light from even a moderately bright lamp is often intolerable, and the ordinary noises of the street are sufficient to provoke intense irritability and headache.

When general anæmia has been induced by severe hemorrhage or starvation, delirium sometimes occurs, accompanied by hallucinations, illusions, and delusions. In the majority of cases the excitement passes off in the course of a few days, or even hours; but, occasionally, in severe inanition, the symptoms persist for weeks, and the condition becomes one of permanent mental impairment. Marshall Hall[2] has described in a graphic manner the cerebral anæmia occurring in young children. The beginning of the affection is characterized by irritability and insomnia; the pulse is frequent and the surface of the extremities is warm to the touch. Subsequently the latter become cold; the face loses its color and assumes an ashy appearance; the eyelids droop, and the pupils become dilated and insensible to light. Sometimes the respiration is devoid of rhythm and accompanied by sighing and rattling, occasioned by the collection of mucus in the trachea. There is also present a tendency on the part of the child to sleep at all hours of the day. In the milder forms of the affection this somnolence gradually passes off, while in severe cases it is extremely liable to pass into coma and death, unless energetic treatment be at once adopted.

An examination of the fontanelle reveals manifest depression of the latter as a result of the diminished intracranial pressure. This symptom is important, since it serves to distinguish the disease from hydrocephalus.

Diagnosis and prognosis.—In the cerebral anæmia arising from general inanition little difficulty will be experienced in forming a diagnosis, and the same may be said of that following uterine, traumatic, or other forms of hemorrhage. Less easy of determination is the anæmia consecutive to vaso-motor disturbances. The chief difficulty in such cases arises from the liability of confounding the affection with cerebral hyperæmia. There are, however, substantial points of difference between the two disorders, which a careful analysis of symptoms will usually serve to reveal.

In cerebral hyperæmia there is usually restlessness and irritability during the day, and confusion of ideas and sleeplessness at night; while in anæmia, on the contrary, there is drowsiness during the day and sleeplessness at night—which is not, however, characterized to a marked degree by confusion of ideas, except, as we have seen, where the anæmia is so severe as to cause unusual cortical irritation. Where the latter condition is present it is true that hallucinations, and even delirium, may be present, but the facial pallor is so great that little difficulty will be encountered in forming a correct diagnosis. Moreover, observations conducted with the surface thermometer, or with the differential calorimeter, show a decided decrease of temperature over the hemispheres and vertex. On the other hand, marked hyperæmia of the hemispheres is accompanied by quite as striking an increase in temperature, and the ears, face, and conjunctivæ are much injected. Palpitations and throbbing of the carotids are characteristic of intracranial hyperæmia, whereas in cerebral anæmia the carotid pulse is soft, and palpitations are rather the exception than the rule. If moderate compression be applied to the carotids of a patient suffering from cerebral anæmia, dizziness and syncope are immediately produced; but where hyperæmia is present no such symptoms are observed at once, unless the pressure be exceptionally severe. The pupil is also usually more or less affected, being contracted in hyperæmia and dilated in anæmia of the higher centres.

Though special attention should always be directed to the cerebral symptoms, careful heed should also be paid to the general history and all concomitant symptoms. A rigid application of the method of exclusion will also be found to yield important information in many cases.

Differential Summary.

Cerebral Hyperæmia.	*Cerebral Anæmia.*
Restlessness and irritability during the day; confusion of ideas and sleeplessness at night.	Drowsiness during the day; sleeplessness not characterized to the same extent by confusion of ideas.
Increased temperature over hemispheres and vertex.	Decreased temperature over hemispheres and vertex.
Facial flushing.	Facial pallor.
Diffuse headache.	Circumscribed headache.
Energy of cardiac action increased; palpitations.	Energy of cardiac action decreased.
Throbbing of the carotids; moderate pressure upon these arteries does *not* produce syncope.	Feeble and frequent pulsation of the carotids; moderate pressure *produces* dizziness and syncope.
Choked disk.	Pale retina.
Contracted pupils.	Dilated, sluggish pupils (frequently uneven).

The prognosis in the majority of cases is favorable, provided there be no disease of the heart, or other profound organic affection, nor chronic inefficiency of the digestive apparatus.

Where the affection is due to derangements of the vaso-motor apparatus, appropriate treatment, when persistently employed, is almost always efficacious.

Treatment.—The method of treatment to be followed will depend, in the first instance, upon the cause which lies at the root of each case, and which is usually ascertainable by careful attention to the clinical history, and by close observation and analysis of the symptoms. If the patient is in a critical condition from severe hemorrhage, he should be placed in a horizontal position with the head depressed and the extremities elevated. It is well also to envelop the extremities, especially the legs, in Esmarch's bandages, in order to force the blood which they contain toward the carotids, thus materially increasing the available supply to the brain. This is a far more efficacious procedure than merely exercising pressure upon the crural and brachial arteries, as it is obvious that, although the blood may thus be prevented from passing through the arteries to the extremities, a considerable quantity must nevertheless remain in a passive condition within the veins of the latter.

The hypodermatic exhibition of brandy is also an excellent expedient, especially where the patient is entirely unconscious. Ether has also been exhibited subcutaneously in considerable doses with good results. If the loss of blood has been exceedingly great, and coma is imminent, transfusion should be tried as a last resort. The body should also be kept warm by covering it with hot blankets, and placing bottles containing warm water along the extremities, thorax, and abdomen. It is a great advantage in such cases to be able to place the subject upon an india-rubber mattress filled with hot water, which can be renewed from time to time by means of appropriate stop-cocks.

The cerebral anæmia which arises from general inanition should be treated with alcohol and hyper-nutrition. Change of climate is also beneficial in many cases. Patients of this class should be enjoined to drink a pint-bottle of pale ale, stout, or malt-hop tonic at meals, and the diet should be of the most nutritious character, consisting chiefly of rare meats, unbolted cereals, and milk; or beef-tea, strong vegetable soups, and chicken broth where the digestion is weak. Iron and quinine may also be given if the stomach is in a sufficiently good condition; and the same may be said of arsenic and strychnia.

When the anæmia is alone traceable to vaso-motor

[1] Vide some interesting facts, bearing on this question, contained in an article entitled Zur Ligatur der Arteria Carotis Communis, by Dr. C. Pilz, Langenbeck's Archiv für Klinische Chirurgie, vol. ix., 1868.

[2] An Essay on a Hydrencephaloid Affection in Infants, arising from Exhaustion, by Marshall Hall. London, 1836.

causes, compressed air-baths, alcohol, and Chapman's spinal ice-bag should be prescribed. If possible the subject should remain during a portion of the year at the seaside, where the atmospheric pressure is great; but even moderately high altitudes are to be studiously avoided.

General faradization of the entire body may be employed with profit; and the application of the galvanic current to the spine is often beneficial. I usually employ an ascending current; but I am by no means certain that special preference is to be given to this mode of application.

Sea-baths, taken during the months of July and August, are most useful in this form of anæmia; the subject should, however, remain but a short time (from four to six minutes) in the water, and should keep moving about. After the conclusion of the bath the limbs and body should be rubbed vigorously with a towel or hair mittens.

Those who suffer from the vaso-motor variety of cerebral anæmia are often subject to attacks of fainting, which are prone to occur before breakfast, or, indeed, at any time when the stomach is empty. Such persons should invariably take a cup of hot coffee and a piece of dry bread, or a biscuit, previous to rising in the morning. By adopting this practice it is possible to stop these sudden attacks of syncope; though it can readily be imagined that the permanent eradication of the vaso-motor difficulty is a matter of more or less persistent treatment, according to the rules already enunciated.

To treat these sudden attacks of syncope with indifference is, however, a grave mistake, since not only is there more or less danger of injury from falling, but the general health of the subject is much jeopardized by their continual occurrence.

Alcohol, as we have already had occasion to remark, is the remedy *par excellence* in intra-cranial anæmia; it should be given in frequent doses (preferably in the form of brandy or whiskey), but never in sufficient quantities to cause violent facial flushing; where the stomach is at all intolerant it may be given hypodermatically or per rectum.

In many cases of cerebral anæmia dependent upon general, or even vaso-motor, causes, I have found it an excellent expedient to put the patient to bed for from twelve to fifteen hours a day. While at rest, electricity (general faradization) and massage may be employed, as recommended by Weir Mitchell, and the diet should be carefully regulated so as to include only the most nutritious ingredients. I generally give chicken broth, rare beefsteaks, mutton chops, strong vegetable soups, and milk, when properly digested. The small portion of the day during which the patient is about should be devoted to moderate exercise, such as walking, driving, or rowing. Horseback riding is, unfortunately, not well endured by some of these patients, though in the less extreme cases it sometimes proves a most valuable adjunct in treatment.

26 West Forty-seventh Street.

Wants to Study Medicine.—Dr. J. B. Kell, of Delphos, O., writes: "Dr. S——, of our city, received the following letter, from a Reverend of Putnam Co., O., who desires to 'sudy medson.' I give it in full.

"'H——, Putnam Co. O.

"'Dr. S——.

"'Dear Sir: aS I think of StuDing medson, and am Aqanted With you By rep and aS you bore the name of A Criston I thout you Would be a good man to Sudy under and ASK you if thare Would Be Eney Chance to Have you fore councle I will fernish my oan books and Bord Ples ancer By retorn male and I will come up Yours in christ.

"'Rev. R—— P——.'"

Clinical Department.

THE REUNION OF SEVERED DIGITS—LITERATURE OF THE SUBJECT.

Referring to a case of Dr. Souther, reported in the *Boston Medical and Surgical Journal*, and quoted in The Medical Record of October 23d, Dr. J. J. Morrissey, of Hartford, Conn., reports the following: "A young man had the misfortune to have his thumb amputated by a hay-cutter, as cleanly as if it were done by the keenest knife. Fully recognizing the importance of the thumb, as the man was a printer, I approximated the parts as closely as possible, yet with little hope of obtaining a good result. I afterward adjusted a splint, and the healing process took place almost immediately. In the course of a month he was able to return to his work, and now, some eight months later, he has the perfect use of his thumb. I confess that I did not hope for such a gratifying result, and it was only as a sort of experiment that I first joined the dissevered parts."

Dr. T. J. Hutton, of Fergus Falls, Minn., writes that the practice of replacing severed digits is not at all uncommon, and refers to the following literature of the subject: "Four cases of digital reunion, reported by me, may be found in the *Medical and Surgical Reporter* of August 23, 1873. One of these occurred in the practice of Dr. Frew, in 1869, the particulars of which—further than the result—I did not learn. The second occurred in the practice of Dr. E. E. Smith, in 1872; a clerk, helping to unload a huge dry-goods box filled with goods, and bound with a projecting hoop-iron band, let it fall to the ground from the dray, severing a finger at the middle of the second phalanx. The third victim was a young man who, while chopping ice on a picnic ground, July 4, 1871, chopped off an index-finger with a hatchet. The fourth case I treated in 1872; a sailor, while discharging his cargo, had his hand forcibly sandwiched between two sharp-edged bars of iron, severing a finger about midway in the second phalanx. In the *St. Louis Weekly Medical Review*, for September 18, 1886, appears a short article on 'Reunion of Cut-off Fingers,' from which I quote the following: In *Vratch*, for 1881 and 1884, as also in *Tchernigov Zemsky Sbornik*, 1884, we find such cases recorded. The Medical Record gives an interesting case reported by Dr. Perkins, in 1885. Dr. S. D. Ivanoff records two cases in the *Russkaia Meditzina*. Both cases occurred in healthy sailors, one of whom had accidentally cut away, by a stroke of an axe, the second phalanx of the forefinger of the right hand. The second phalanx of the thumb of the left hand was cut off in the other case. In one, treatment was instituted two hours after the accident, and in the other three hours after the accident. In both there was union by first intention and limited mobility, with a return of sensibility."

HINTS FOR ANOTHER THEORY OF URÆMIA AND URÆMIC CONVULSIONS.

Dr. J. C. Peters, of this city, writes: "In C. M. Ralfe's 'Chemistry,' page 118, we read: 'Urea is isomeric with ammonium cyanate [*i.e.*, it is the same in composition but differs in properties]. It is probable, moreover, that cyanogen compounds precede the formation of urea, and act with great molecular energy till they pass into the more stable but effete form of urea, when they are cast out of the body. Ammonium cyanate is the type of living, urea of effete, nitrogen. Urea represents the ultimate product of the metabolism of the nitrogenous constituents of the food and tissues.' If urea is not formed, cyanate of ammonia accumulates in the blood and tissues.

"We know very little about the action of cyanate of ammonia, but we do know a great deal about that

of cyanate of potash, which it must closely resemble. The action of cyanide of potassium is identical with that of hydrocyanic acid, for which it may be substituted. Internally it has been fatal in doses of from three to five grains. The symptoms are insensibility, severe muscular spasms or convulsions, clammy skin, glistening eyes, stertorous breathing, fixed jaws, foaming at the mouth, and death in convulsions, or by asthenia. In uræmia there is a drowsy condition, more or less intense, with frequent recurrence of convulsions of an epileptic character.

"Some consider uræmia due to the poisonous action of retained urea, but large quantities of urea have been injected into the veins of animals without inducing uræmia, and it has often been given as a safe diuretic, in doses of ten grains, three times a day, in the dropsy following scarlet fever.

"Again, uræmic convulsions occur in some cases without there being evidence of any marked diminution in the excretion of urea, as in puerperal convulsions.

"Others suppose that the urea is decomposed into ammonium-carbonate, and that the blood is poisoned with simple ammonia. But this has been disproven. Pure carbonate of ammonia will not produce these effects, but cyanide of ammonia very probably will.

"Urea was shown by Nohler fifty years ago to be identical with the hydrated cyanate of ammonia, and he then furnished the first proof that a complex organic product could be artificially formed. In 1868 Williams made urea from cyanate of lead. Cyanide of potash was fused at a low heat with red lead, and finally urea was formed. Basaroff made urea from carbonate of ammonia. Again, urea is often made from ammonia cyanate by simply evaporating a solution to dryness over a water-bath. Heated to 120° C. urea melts and at a somewhat higher temperature; ammonia, and cyanate and carbonate of ammonia are formed, and cyanuric acid is left in the retort.

"The point made is that it is the cyanogen and not the ammonia which is the active poisonous agent in uræmia. Unfortunately there is no direct antidote to prussic acid, although the Messrs. Smith have recommended an alkaline ferruginous solution which operates by converting the poison into insoluble prussiate of iron. The patient is directed to swallow first a solution of carbonate of potash, twenty grains in an ounce of water, and immediately afterward a mixed chalybeate solution of ten grains of sulphate of iron and one ounce of tinct. ferri perchlor. in one ounce of water. M. Preyer proposes the subcutaneous injection of a small quantity of atropia as an efficient antidote."

TREATMENT OF TUMORS BY NASCENT PHENIC ACID.

Dr. F. G. Blynn, of Manchester, N. H., reports the following cases:

"Case I.—A. S——, widow, aged sixty-five, affected with glandular enlargements in her neck. The submaxillary glands were the seat of the disease, and were in size as large and hard as a good-sized green apple. My treatment was subcutaneous injection of Déclat's hypodermatic solution of pure nascent phenic acid. I gave twenty injections, alternately in the tumors themselves and in the abdomen. After the first ten injections had been administered the tumors began to soften, and had diminished in size about one-eighth of their bulk. At the twentieth injection the reduction in size was one-quarter. At that time the lady was called home to the South on account of the sickness of a relative, and since that time I have heard nothing of her.

"Case II.—About the first of May, 1885, I was called in haste to see a married lady, aged twenty-six, supposed to be suffering with diphtheria. On examination I found high fever, eyes injected and of a yellowish hue, pains at the base of the brain, considerable inflammation in and about the ovaries, with intense sharp pains darting down the thighs, tonsillitis of a mild character, with a superficial ulcer on the left tonsil. The usual remedies were administered, and hot flaxseed poultices applied to abdomen and back, which afforded relief. At a subsequent visit I acquired a history of the case, which was as follows: Six years previously she had an attack of peritonitis shortly after the birth of her first child. After recovery from this attack she experienced at the menstrual periods a series of epileptiform spasms, recurring periodically, and generally accompanied with much the same symptoms as those detailed above, except that she had no tonsillitis. She had submitted to all kinds of medical treatment, but without material benefit. About two years since she had observed a tumor the size of a hen's egg in the right ovarian region, which showed itself occasionally, but could be felt most of the time when she was sitting in her chair. Some physicians had diagnosed a fibroid of the broad ligament; others a right ovarian tumor. One medical attendant diagnosed an abscess, which he was anxious to open, but she would not consent to it. I gave the lady one subcutaneous injection daily of eighty minims of Déclat's hypodermatic solution of pure nascent phenic acid, and, up to date, have given sixteen in all, with the following result: Total disappearance of spasms, a gradual diminution in the size of the right ovary, and the patient informs me that she begins to feel as she did when she was a young girl. Last summer she kept her bed for five months, and now she does some housework, sews, and takes a short walk each day.

"The above are two of many cases which I have treated by the antiseptic or Déclat's method, and which in my hands has produced brilliant results. The essential for success is a pure acid. Who would dare administer forty grains of the phenic acid generally found in drug stores? And yet Déclat's acid has been and can be given in heroic doses without fear. In Bellevue Hospital and in the practice of Dr. J. R. Wood, forty grains have been given in divided doses during the twenty-four hours, with the most beneficial results."

COCAINE AS A PERMANENT ANALGESIC.

Dr. Charles Schram, of this city, reports the following case: W. R——, a German, aged thirty-eight, of large and massive frame, had usually enjoyed excellent health. His occupation entailed much exertion, such as running up and downstairs, stooping, carrying heavy loads, etc. On the afternoon of October 13th, while stooping over, he felt a crick in the small of his back, the pain being sharp, shooting, and momentary. He continued at work, however, and went to bed feeling tolerably well. On awaking the next morning, he suffered from severe pains, sharp and lancinating in character, extending across the small of the back and the lower part of the abdomen, and increased by the slightest exertion. There was no fever. A menthol liniment, mustard poultices, dry cups, massage, "ironing," electricity and dry cups, free diaphoresis and quinine pushed to its constitutional effects were tried without avail. On the evening of the third day Dr. Schram detected three or four points of marked tenderness in the lumbar and upper sacral regions. Into each of these, after warning the patient of the constitutional effects which might follow, he injected ♏x of a freshly prepared solution (strength not stated) of hydrochlorate of cocaine. The effect was marked, and within five minutes after the third injection, the patient, who just before had groaned with pain on attempting to stir, much to his own surprise, sat up in bed, then got out of it and walked several times up and down the room. He was entirely free from pain, but said he still felt weak in the back. About one-half hour later he complained of dizziness, nausea, and obscured vision. The pupils were much enlarged but reacted readily to light. The pulse remained unchanged. The first dizziness and nausea passed away in the course of an hour, and the dimness of vision was gone the follow-

ing morning. At this time the pain had again returned, but only to a slight degree, in the upper sacral region. Here the injection was repeated with the same happy effect. Constitutional symptoms again appeared, but were less marked. The dimness of vision disappeared in about four hours. The patient sat up all the afternoon and, with the exception of "feeling weak in the back," and loss of appetite, he was quite comfortable. On the following day he felt well enough to resume his work. There has been no recurrence of the pain since. Some anæsthesia in the lumbar and sacral regions remained for three or four days. The writer continues: "In employing cocaine in this case, my intention had been to afford temporary relief, in preference to resorting to morphine. That a permanent cure would result, I had not expected. The experience above detailed has led me to think that the subcutaneous use of cocaine may prove useful in those obstinate cases of facial, sciatic, and other neuralgias which resist all other modes of treatment, and where it may obviate the necessity of resorting to surgical measures."

THE TREATMENT OF SYPHILITIC CONDYLOMATA.

Dr. A. G. Parsons, of Durham, N. C., writes that he has tried the following ointment in many cases of syphilitic growths on the scrotum, and around the anus, and has never met with a failure:

℞. Morph. sulph.	.....	gr. ij.
Pulv. camphor	.....	gr. xx.
Bismuthi subnitrat.,		
Hydrarg. chlor. mitis	.....āā	ʒ jss.
Cosmolin	.....	ʒ j.

Sig. Wash with soap and water, and then rub the ointment in thoroughly twice a day. In a few days, Dr. Parsons says, the warts will be found to have entirely disappeared.

A CASE OF MYXŒDEMA.

Dr. W. H. Bryant, of Savannah, Mo., writes: "Mrs. N——, forty-six years of age, of remarkably healthy parents, and a perfect type of both physical and mental health, was delivered of her third child twelve years ago. Saw her ten days after and found her with all the characteristic symptoms of septicæmia, from which she recovered and was dismissed well in about three weeks. Two years after she was again confined, with her fourth child. Five days after symptoms of septicæmia were manifested, but as she was at once put under proper treatment, all signs and symptoms of her former serious attack soon disappeared, and in a few days she was again dismissed well. I give this brief puerperal history, as it was a probable factor in the etiology of a subsequent disease. Two years after her fourth and last confinement, I was requested to see her on account of failing health. She presented the appearance of one suffering from Bright's disease; the face and the eyelids were œdematous and had that peculiar pale, waxen color so characteristic of chronic nephritis. Her feet and ankles were also swollen, but did not pit on pressure. I felt sure that she was suffering from some one of the forms of Bright's disease, and obtaining a sample of her urine, I was surprised to find it did not contain a trace of albumen; but remembering that in the cirrhotic variety we may or may not have albumen, I still thought of nothing else but Bright's disease; for at that time I knew of no affection having so close a resemblance, and consequently gave her treatment in accord with the diagnosis. Not long since I had the opportunity of reading Sir William Gull's description of this disease under the name of 'Cretinism in the Adult.' Some time after the appearance of Dr. Gull's article, Dr. Ord, in a paper read before the London Medical Society, called attention to the same condition in connection with thyrodectomy, stating that all who had undergone that operation became myxœdemic. Charcot, of France, and Kocher, of Berne, have each called attention to it, stating that it is almost always confined to adult females. But males, according to Dr. Andrew Clark, are not exempt from it.

"After looking up the scanty literature upon this seemingly rare disease, I became sceptical in regard to my diagnosis in Mrs. N——'s case—in fact, believed it to be a case of myxœdema, for the reason that many of the prominent symptoms of Bright's disease were absent. Accordingly, I visited her a short time since, and found her in the following condition: The face presented the same pale, puffy, waxen appearance as when the patient was first examined six years ago. The hands, arms, feet, and legs were enlarged to almost double their natural size, the swelling of the hands being especially marked. The abdomen was as large as at the eighth month of gestation. The patient thinks, talks, and performs all motions very slowly and carefully, and in conversation she is provokingly tedious. She never leaves her house for a walk on account of the slow and awkward manner of her gait, and the constant fear which she has of falling. She can neither button nor unbutton her shoes, and it requires a long time for her to dress herself, and very often it is necessary to have assistance in completing her toilet. The skin over the entire body and limbs is dry and scaly; the lips and tongue are flat and thick, and with the sallow complexion, vacant stare, etc., she presents the appearance of an imbecile. During the day there is a sero-mucous discharge from the nose, which compels her to keep a handkerchief always at hand, and at night saliva flows from the mouth in quantity sufficient to saturate the pillow. On top of both shoulders there is a large deposit of fat or mucine, and on the dorsal surface of all her fingers, between the first and second joints, is the same thickening of skin from this mucine deposit. On the palmar surface of the left little finger, between the first and second joints, there is an enlargement about the size of a cherry. This swelling of the hands with the thickening of the skin, which gives the 'spade-like' appearance, is hard and unyielding.

"She eats with great care and deliberation on account of not being able to swallow well, and does not attempt to take any but small bits of solid food. A year ago a tooth was extracted—upper bicuspid—which caused an ecchymosis spreading over the entire cheek and side of the neck, and lasting six weeks. Her mental capacity is weak, and she is keenly aware of this fact, as she said to me while visiting her, 'she thought sometimes she would soon go to the asylum.'

"The first two years of her disease, she states, she was always so sleepy that she could not sit down in quietude for a few minutes without falling asleep, and it was with difficulty that she could be aroused. At this time I prescribed active diuretics, cathartics, and diaphoretics, under the impression that uræmic coma or convulsions were impending. There has never been any enlargement of the thyroid gland, and at present it seems to be of normal size, though a thorough and satisfactory examination could not be made on account of the thickening of the skin and tissues of the neck. In the majority of the cases so far reported, the thyroid has been either extirpated or atrophied, and this connection between disease or absence of the thyroid and myxœdema will, no doubt, sooner or later lead to an understanding of the function of this gland. As there are some features of myxœdema common to it and Bright's disease, from which affection it has to be differentiated, I will notice those I have been able to gather from this single case. The œdema of the face, hands, and feet is hard, elastic, and resilient like rubber, and does not pit on pressure. This is in such marked contrast with the soft, putty-like swelling observed in Bright's disease, that it, and the ab-

sence of albumen, severe cephalalgia, and other symptoms referable to the nervous system, will be sufficient to prevent an error in diagnosis. In regard to the treatment of myxœdema, nothing definite has as yet been suggested. Jaborandi, or its active principle, pilocarpine, has been recommended on account of the dry skin. I believe that arsenic has also been used.

"This is about the extent of therapeutics, so far as I have been able to gather from reported cases. I have put my patient on the use of bitter wine of iron and Fowler's solution, 3 j. of former to ♏ v. of the latter. Of course the use of arsenic is but theoretical, though its well-known virtue in diseases of the skin would suggest its use in myxœdema. I will continue its use for a sufficient length of time to test its virtues. In the present state of our knowledge as to the pathology of myxœdema all remedies must of necessity be directed to the relief of the symptoms."

SPONTANEOUS ORIGIN OF SCARLET FEVER.

Dr. M. R. Perry, of Russellville, Ky., writes: "I noticed in one of the late numbers of The Medical Record a note in regard to the possibility of the spontaneous origin of scarlet fever. About October 1st I was called to see a child, ten years of age, who presented the following symptoms: Temperature, 103½°; sore throat, inflamed tonsils and pharynx. The child, the day before, had complained of chilliness frequently, and that night vomited freely. On the second or third day a general efflorescence became visible, and also the red tongue, with the peculiar strawberry appearance, was noted. There was a troublesome cough for a day or two, but it, with all the symptoms, gradually abated, and in ten days the child was out of bed. There was desquamation of the hands and feet; but vaseline was used freely over the body, and this may have prevented its showing much on the trunk and extremities. Was the case one of scarlet fever? and if so, where did the contagion originate? There was not, up to this time, a case of scarlatina in the entire town, but following this there were several cases with similar symptoms, but not so marked. I would like an opinion as to the nature of the case."

CIRCUMCISION UNDER COCAINE.

Dr. B. F. Kingsley, of San Antonio, Tex., writes that, having seen the report of a case of this sort by Dr. E. R. Palmer, he is led to relate one of his own. He performed the operation on November 29, 1885, and makes the claim to priority in the use of cocaine in circumcision. The patient, Mr. G——, applied to him for the relief of insomnia, frequent nocturnal emissions, and a variety of obscure nervous symptoms. He had a very redundant and contracted prepuce, partially adherent to the glans, and circumcision was advised and consented to. The operation was performed by the author, assisted by Dr. Berry, on the date above mentioned. A common rubber band, half an inch wide, was applied around the penis close to the scrotum, and three drops of a four-per-cent. solution of cocaine were injected into the foreskin at each of three equidistant points along the line of proposed incision. In a few moments the prepuce was grasped in the shank of a double tenaculum, and divided by the scissors. The mucous membrane was then slit up and the parts united with a continuous suture of iron-dyed silk, and the wound dressed with vaseline and absorbent cotton. There was no pain, and no hemorrhage to speak of. There was but little subsequent swelling, and union occurred by first intention. The sutures were removed at the end of thirty-six hours, and the patient returned to his duties on the seventh day greatly improved in health and spirits.

Progress of Medical Science.

An Autopsy Extraordinary.—The following report of an autopsy is by a physician, who is said to be doing a lucrative practice in Delta, O. It goes to show that success in gaining the confidence of the community is not necessarily conditioned on such an appreciation of anatomy, physiology, and pathology as the modern school holds to be correct. "E. C. C——, opened on September 25, 1885, for post-mortem examination. We find that sickness first started in the kidney No. 18, and from there to the hip bone, No. 15, from there to the spine No. 1, from that to the blood, cancer or abscess, blue cancer, etc. From large artery in the 6th rib affected and to the muscles of the hip, where started the ulcer on the left side, and thense to the urine, from thense to large intestine which was affected fifteen yards, and from their to a milky deposit in the bladder, and thense back again to the kidneys, from thense to the hair veins, from thense to the back, and thense to the stomach, and thense to the bladder, and thense to a fever through all the system, No. 18, the liver's weight was 4 lbs., which was badly affected and mortified; from thense to the largest nerve which is connected with the brain which affected them. Weight of the kidney one half pound. The doctor's statement before opening the corpse was consumption of the liver and kidney."—*The Medical Age.*

Hysteria in a New Light.—According to *The Lancet*, September 4, 1886, the views of Mr. de Berdt Hovell on the subject of hysteria are to be carefully received as those of a shrewd practitioner of long practice and large experience. He strongly protests against the whole hypothesis of hysteria. He thinks the theory that localizes the disease in the uterus is the mere survival of medical demonology, which located ill-humor in the spleen, blue-devils in the liver, and the soul in the pineal gland. He claims for hysterical patients more fairness of treatment and more discrimination. He attributes many of the cases to shocks, physical or moral, leading to deficient or depressed nerve-power, with all that this implies in the way of pain, irritability, inability for locomotion, etc. Mr. Hovell admits that the cases are difficult to cure; but he maintains that if we are to deal with them effectually we must "set aside all consideration of the organs of reproduction, which most probably are not concerned, and transfer our attention to the moral nature." Mr. Hovell gives several cases in which there was a distinct history of shock or exhaustive work, to explain the break-down in the nervous system. We live in days when the nervous system is getting its full share of attention from pathologists and physicians, and when even gynecologists are finding out that the uterus, and even its appendages, which are now blamed by some for everything, are not such culprits as has been supposed. Mr. Hovell will admit that the cases of so-called hysteria do occur chiefly, though by no means exclusively, in women. In their organization there is *something* specially favoring the occurrence of this state or disease. It may not be in the special organs of the female so much as in the special organization of the nervous system. Mr. Hovell deserves credit for insisting on this point, and he may well be satisfied to know that the drift of opinion among physicians is toward the acceptance of his views. Women are more finely strung than men. They are more liable to pain or pains of all sorts from mere functional causes. Such a constitution is perplexing to the physician, but it has to be considered, and not treated as a sort of crime, as has too often been the case.

Rupture during Labor of Varix of Labium.—Dr. Atkinson relates the following case (*The British Medical Journal*): Mrs. F——, aged thirty-nine, was in her eighth confinement. On examination a breech was made out, and

in a short time it came well down in the pelvis. When near the outlet the right labium began to swell. Delivery was easily effected, and while the child was being separated the patient was seized with another strong pain. On examination a second bag of membranes could be felt. The tumor, however, steadily increased to an alarming size, and another pain coming on, it suddenly burst on its side, deluging the bed. A napkin, folded so as to make a firm pad, was held to the parts, so as to effectually stop the bleeding. Forceps were applied, and the second child suddenly expelled, the injured part being freely compressed at the same time. On examination it was found that the inner side of the labium was so torn that four fingers could be passed into the opening, which led to a cavity sufficiently large to admit the whole hand. Iodoform was applied, together with plugs and pressure. About the fifth day a piece of vein, about three-fourths of an inch long, which lay across the wound, sloughed off, a little bleeding taking place. On questioning the patient about the veins, it was ascertained that she had observed a lump there for some time. She also noticed that it became larger toward night, but did not think it worth while mentioning. Iodoform dressings and sublimate injections (1 in 3,000), twice daily for a week, secured a good recovery.

Turpentine in Painful Affections of the Digestive Organs of Children.—Dr. Bedford Brown, in the *Journal of the American Medical Association* (September 25, 1886), advocates the use of turpentine in the management of the more painful and grave affections of the alimentary canal of infants and young children. According to his personal experience, the oil of turpentine fills a place which no other remedies, such as opiates, astringents, alkalies, mercury, or bismuth can fill. He believes the therapeutic action of turpentine to be of a multiform character. It is eminently soothing to the irritated and inflamed mucous membrane, and seems to "promptly arrest the rapid exfoliation of epithelium." It is antifermentative, deodorant, and antiseptic. He further holds the oil to act as a stimulant to the salivary, stomachic, pancreatic, and intestinal secretions. The author lauds the beneficial action of turpentine, especially in gastralgia, intestinal catarrh, enteritis, and a number of unclassified painful affections of a functional kind. He prescribes the drug according to the following formula:

℞. Mucilag. acac..... f ℥ iss.
Sodæ bicarb..... ..... x. grs.
Chloroformi ..... x. gtt.
Ol. terebinth..... 3 ss.

M. Sig.—A teaspoonful every two or three hours to an infant of six months.

Recovery after Fracture of the Spine.—At a recent meeting of the Cambridge Medical Society (*The Lancet*, September 4, 1886) Mr. Wherry related a case of recovery from fracture of the lumbar vertebræ, with paralysis of legs; and one of recovery after fracture of the cervical vertebræ, with paralysis of arms; death occurring twelve years after. Case 1.—Charles C——, aged sixty, on October 29, 1873, fell 57 feet from a scaffold, and at 28 feet a plank checked his fall, and lower down he alighted on an office ridge-roof. He was nineteen weeks in Addenbrooke's Hospital. A catheter was used for two years; he recovered power in his bladder by degrees, and from his invalid chair began to walk with crutches, and could go a hundred yards pretty well. He had enjoyed fair health during the past thirteen years; now his legs are swollen and ulcerated. His hands are suffering, probably from the crutch palsy. The urine is retained ordinarily, but any beer or tea beyond a most moderate quantity is followed by incontinence. Case 2.—Peter H——, nearly twelve years ago, in 1874, was standing on the top of a load of tares, and hauling a rope which he thought was fastened down below, when he fell backward on to the ground. He was in the hospital about a year, and had paralysis of the bladder for seven or eight days only; there was no paralysis of the lower limbs; there were large sloughs on the scapulæ. In carrying him to bed crepitus was felt. His breathing was entirely diaphragmatic. When he had been in bed about a year he began to gain flesh and strength, and sat up in a chair, and later walked about carrying his head erect and his neck stiff. Later he could walk vigorously, but his arms remained paralyzed and fixed in the bent position, some slight power of extension was regained in the fingers of the left hand especially, and the upper limb could be moved as a whole a few inches away from the body. There was very little thoracic movement, as indicated by a tape around the chest. After nearly twelve years of excellent health he died thin and anæmic, and with a large spleen. Mr. Wherry here exhibited specimens which showed the bodies of the fifth, sixth, and seventh cervical vertebræ to be firmly anchylosed. No remains of intervertebral substance between the fifth and sixth, and very little between the sixth and seventh vertebræ. The coalesced bodies of the fifth and sixth and the bodies above bend forward so as to make an angle with the bodies of the seventh cervical and upper dorsal. The cervical spine has a marked curve, with its concavity forward. The canal shows a corresponding bend; the angle and the narrowest part of the canal are between the lamina of the fifth and posterior upper edge of the sixth body, an illustration of the usual mode of crushing the cord. The laminæ of the fifth, sixth, and seventh are firmly joined. The articular processes are also firmly united by bone. There is a separation between the articulations of the fourth and fifth, and also, but less, between the third and fourth. The transverse processes of the fifth, sixth, and seventh are closer than natural, but not touching; the vertebral artery canal is patens. The intervertebral canal for the sixth spinal nerve is small and irregular in shape, and this cord must have been nipped at its exit from the vertebral canal. The dry specimen showed a general atrophy of the parts damaged, especially the bodies of the vertebræ; and a singular absence of callus. Mr. Wherry thought that the brachial cords were pressed upon or damaged at the intervertebral foramina, the spinal cord itself being very little injured. The *main en griffe* was explained by the extensors of the fingers regaining some power, but the interossei muscles remaining quite paralyzed.

A New Method of Removal of the Entire Tongue.—Dr. F. A. Purcell describes in *The Lancet* (September 18, 1886) a new operation for the removal of the entire tongue and floor of the mouth. It is applicable to the removal of one-half of the organ if necessary. The author calls his method the "supra-hyo-glosso epiglottidean" one, and describes it as follows: "The patient having been anæsthetized, first make an incision in the neck, about a quarter of an inch long, in the middle line from the hyoid bone forward, only skin deep; then pass a whipcord ligature through the raphé of the tongue, an inch behind its tip, to hold the organ by; gag the mouth open; introduce the left index-finger well to the bottom of the glosso-epiglottidean pouch, back of root of tongue. It may be necessary at this stage, so as to make room to get well round the base of the tongue, to snip with scissors the palato-glossi muscles, viz., the anterior pillars of the fauces, as also the stylo-glossi muscles of both sides; these may require pressure-forceps to be employed, as generally some small vessels may bleed; these can be taken off when wanted out of the way. Now take, say, Wood's hernia curved needle on handle, being stout, long, and well curved, threaded with medium-sized whipcord; or the needle, in place of the thread, may carry the platinum wire if the surgeon intends using the galvanic écraseur. Hold the needle in the right hand horizontally, its concavity turned upward and toward the neck, enter its point at the submental incision immediately above the hyoid bone, pass it through the raphé of the mylo-hyoid, the genio-hyoid, and the

lower fibres of the genio-hyo-glossi muscles, and direct it to the right side, forming the sweep of a half-circle; now feel for the point of the needle with the left finger as the needle is pushed through so as to enter the bottom of the side of the right glosso-epiglottidean pouch above the great cornu, hook up the loop of thread, or it may be the platinum wire, with the left finger, pull it well through and out of the mouth, and withdraw the needle; do the same on the opposite side, for which it will be necessary to change the position of the hands, holding the needle in the left and placing the right index-finger in the left side; a loop will in this way be lodged in the pouch at either side; thread each loop with the platinum wire, making a hook of wire by bending its end on itself; draw on both sides, so that the ends of the wire are brought out at the supra-hyoid incision, make even and detach the loops; the centre of the wire now forms a loop, and rests on the base of the tongue. Before proceeding further, remove the pressure-forceps from off the cut anterior pillars of the fauces; take the same curved needle (Wood's), unarmed this time, and enter it again at the supra-hyoid incision in a vertical manner, its concavity directed toward you; feel for the point of the needle with the left finger as it is pushed through the centre of the root of the tongue and in front of the epiglottis; guard the point by means of a piece of cork, here the needle remains to act as a guide for the wire to travel behind; lodge the wire behind the guide and draw it taut, complete its connections, and work the écraseur—the tongue is severed through its root in a well-defined vertical plane; withdraw the guide-needle. Secondly, free with scissors the anterior and lateral attachments of the tongue and floor of the mouth, release the organ and withdraw it through the lips. No hemorrhage, as a rule, occurs; but if the battery or the écraseur should be worked too quickly and bleeding does take place, a sponge on a stick, pressed into the furrow and following the wire, will be found sufficient to restrain it; the linguals are included and cut through by the wire, and if they should so happen to spurt, they can be secured by pressure-forceps on the stump and tied. The ordinary simple écraseur, either single wire or twisted whipcord, may be substituted in place of the galvanic. The entire tongue may be removed as described, or the one-half, if so desired, by scoring the dorsum of the tongue with a blunt-pointed scalpel exactly in the middle line, and dividing the tip freely down and through the middle line of the frænum; then take both threads (one having been previously passed through each tip), one in each hand, and, using the forefingers much in the same way that one would for tightening a ligature on a deep vessel, split the tongue in two halves, and free the diseased half with scissors."

THE PHYSIOLOGICAL ACTION OF MENTHOL.—Dr. Goldscheider, at a recent meeting of the Physiological Society of Berlin, discussed the action of menthol on the sensory nerves. It was well known that it produced on the skin a sensation of cold, which was commonly ascribed to evaporation. On the other hand the same sensation, when produced in the mouth by solutions containing menthol or peppermint, was explained by a supposed astringent effect. Dr. Goldscheider had come to the conclusion that neither of these explanations was correct. He made his experiments with a solution of menthol in lanolin, which he rubbed into circumscribed regions of the skin. After the rubbing the thermometer showed, in all such places, an increase of temperature to the extent of several degrees, notwithstanding the marked sense of cold produced. The hypothesis of evaporation was excluded by the fact that the feeling of cold was no less marked when the part rubbed was covered with a watch-glass, and could, therefore, be produced only by direct stimulation of the nerves of sensation of cold. Again, if of two corresponding places on the forehead, where these nerves are most abundant, one were rubbed with the menthol ointment and the other not, bodies which previously had caused no particular sensation would be felt as cold on the former spot but not on the latter. Dr. Goldscheider, observing that while some regions, as the forehead, were especially sensitive to cold, others, as the elbow and the volar side of the wrist, were so to heat, found that the inunction of these with menthol produced a sensation of warmth, though less striking than that of cold in the former regions; and he called attention to the recent communication of Prof. Herzen on the precisely analogous results of pressure on the nerve-trunks in these regions respectively. He therefore concluded that the sensations, in some places of cold, and in other places of heat, produced by menthol, were purely subjective and consequent on the direct stimulation of the special nerves of temperature, those usually cognizant of cold being far more sensitive to its influence than were those adapted to receive impressions of higher temperature.—*British Medical Journal.*

THE TRANSMISSION OF MEASLES FROM PLACE TO PLACE BY HEALTHY PERSONS.—The possibilities of carrying the contagious principle of measles from place to place by the medium of the bodies of healthy persons was recently discussed by the Medical Society of Berlin, and one gentleman, Joël, of Lausanne, presented certain facts which lead to the belief that such a possibility does exist, and that the medium is often furnished by physicians themselves. One case which was cited was that of a boy who was brought from Geneva to Lausanne while he was passing through the incubation stage of measles. The butcher and the postman who served the institution to which the boy was brought conveyed the disease to their children, who were attacked with it in a short space of time, and, what is quite remarkable, the children in almost every house to which the postman delivered letters were attacked. A little girl was brought to a hospital, and in a few days had undoubted symptoms of measles. Her father had paid her several visits before the measles appeared, and it was ascertained that two of his children were suffering at his home with the disease. Eight other children in the hospital were quickly seized with it. It is thought that physicians cannot always avoid carrying the contagium with them, even when extraordinary care is taken. Prophylactic means on the part of the physician should be as thorough as possible, however, by disinfection, change of garments, and all other available procedures.—*The Archives of Pedriatrics.*

THE TREATMENT OF ORCHITIS AND EPIDIDYMITIS.—In the treatment of orchitis and epididymitis, the result of acute gonorrhœa, Mr. Frederick W. Lowndes claims excellent results from a plan introduced by Mr. Furneaux Jordan in 1869. It consists in painting the affected testicle with a strong solution of nitrate of silver (two drachms to the ounce), at the same time enforcing strict rest in bed, and supporting the inflamed organ upon a small pillow so as to prevent it hanging down. Mr. Lowndes has invariably employed the same treatment, and in eleven years has treated two hundred and sixty-nine cases. He has always found it highly successful. The acute pain, often amounting to agony, is soon subdued, and in the majority of cases the organ returns to its normal size in the course of a few days. Sometimes a second painting is necessary, but this then suffices. The same plan of treatment has also been used by him successfully in private practice. When the patient cannot be induced to take absolute rest in bed, and when the patients are compelled to follow their usual occupations, the recovery must obviously be slower, as it is not possible by suspensory bandages or by means of handkerchiefs, however skilfully applied, to insure such perfect rest as when the patient is lying in bed. While the rest is an important item in the treatment, it is not by itself sufficient to effect a cure. The immediate effects of the nitrate of silver in allaying the pain are most marked, though for obvious reasons the nitrate must act more powerfully while the organ is in a state of quiescence than when it is constantly active.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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WHENCE COMES THE POISONS OF DIPHTHERIA?

WE referred recently to a case of scarlet fever of seemingly spontaneous origin, or in which, at least, it was impossible to trace its contagion, the disease occurring in a small Italian town completely isolated from the world. Another instance of a somewhat similar nature, though more easy of explanation, is mentioned by Dr. George M. Kober, U.S.A., in a report upon the climatology and health of Surprise and Goose Lake Valleys, presented to the California State Board of Health in 1886. Two young men, who had had measles in Goose Lake Valley, returned after their convalescence to their home in Warner Valley, Ore., and remained at work for nearly a month, when they were brought back again with scarlet fever. There had been scarlatina at Goose Lake Valley, but none in Warner, which place is distant fifty miles from any settlement. In this case the virus was probably conveyed in the clothing or in some other articles carried by the men from Goose Lake to their home.

In the same report Dr. Kober recounts the medical history of a family residing in Surprise Valley. The household was that of a well-to-do farmer who had erected, a few years before, a dwelling on a gravelly spot, formerly used as a corral and the site for a cow-shed, little suspecting that the excrementitious matter had for years permeated and polluted the soil. In the fall of 1879 two cases of typhoid fever occurred in this family, affecting the father and his brother. In September, 1883, three of the children were seized with diphtheria, and subsequently the entire family suffered. One of the children died from laryngeal complication. The inhabitants of this house were intelligent and cleanly, and there was no room to assume contagion, either mediate or immediate, unless possibly the disease prevailed among the fowl. In view of all the circumstances, the author thinks that the occurrence of typhoid fever and diphtheria could reasonably be connected with a local cause, viz., the water-supply. It is very probable, he argues, that the animal refuse matter permeated the gravelly soil to a considerable depth, and with the recession of the subsoil water, under the influence of the warmth of July and August, became converted into a poisonous material which finally percolated into the well.

The theorists of the Pettenkofer school would have little difficulty in accepting this explanation and finding in the case a strong argument in support of their views as to the mode of origin of the so-called filth diseases. But it is the current belief at the present day that diseases like diphtheria cannot arise *de novo* from soil pollution, but that there must be present particulate germs capable of propagating them. Dr. Kober does not dispute this theory, but simply argues that disease-germs must have had an origin some time and somewhere, and so implies that the germs can arise *de novo*, which is, of course, the same thing as saying that the disease itself can originate without the agency of contagion.

In an account of an epidemic of diphtheria occurring in Pitt River Valley, contained in the report above referred to, the writer, Dr. Patterson, states as his belief that the poison emanated from a large tract of swamp land in the neighborhood. The following facts are given in support of this opinion: 1. Not a single case appeared to the windward of the swamp. (In this country the wind blows almost constantly from the south and west.) 2. Almost every child and many of the adults, living in the valley to the leeward of the swamp, were stricken with the disease. 3. The virulence of the diphtheria was in direct ratio to the proximity to the swamp and the exposure to the emanations therefrom, modified, of course, by individual characteristics of the patient and by his other surroundings.

A suggestive case is related by this writer. The family of the proprietor of a hotel at Alturas, hoping to escape the disease, abandoned the family rooms on the ground floor, and occupied instead the parlor and adjoining room on the second floor. His family escaped attack until June, when a great freshet occurred, causing Pitt River to overflow its banks and inundate the town site, filling all the cellars, wells, and privy vaults. His family had meantime returned to the family quarters directly over a cellar, now filled with water and decaying vegetables, which latter had been stored there while fresh for hotel use, but were now carelessly allowed to remain. Both of his children died of diphtheria, and all the adult members of his family were attacked by it, while none of the persons inhabiting other portions of the house was affected. The disease at that time was confined to those who lived immediately over the cellar mentioned, notwithstanding the very unfavorable sanitary conditions which then prevailed throughout the town.

From his experience in this epidemic Dr. Patterson comes to the conclusion that one course, at least, of diphtheria is an emanation from decomposing vegetable matter, though he does not doubt that there are other sources from which the poison may arise. Dr. Kober, as we have seen, believes that pollution of the soil by decomposing animal matter is also a fruitful source of the disease or of its microbe. It remains for those who do not admit the possibility of any other mode of propagation of diphtheria than by contagion to explain the occurrences above cited and to demonstrate wherein the authors have erred in their conclusions.

DEFECTIVE VISION AND HEADACHES.

MUCH has been said of late about the reflex neuroses from defective vision and weakness of eye-muscles. The commoner troubles appear to be headaches of various

kinds, nervousness, neurasthenia, epilepsy, etc. At a meeting of the Chicago Medical Society Dr. F. W. F. Coleman said that, in an examination of the eyes of pupils in Boston, in eighty-nine cases of defective vision fifty-nine were traceable to over-study. Out of this number twenty-five to fifty per cent. of the cases of headache which occurred were relieved by supplying suitable glasses. Another class of cases in which headache occurs is when there is weakness of the recti-muscles. By supplying proper prismatic glasses this weakness may be overcome, and the headache disappears.

To offset this Dr. F. C. Hotz said that he had been surprised to see how few cases of defective vision came to him complaining of headache. He has not found it a prominent symptom. In looking over his record of cases he finds a great many cases of astigmatism, hypermetropia, and ametropia, in which the symptoms complained of are difficulty of vision, but not headache. Children often complain of not being able to see the figures on the blackboard, and consult the oculist for that trouble directly. But if a large number of cases of the eyes of children are examined, it will be found that in youth a normal eye is often far-sighted, and yet such persons are able to do the work required.

A view somewhat similar to this was presented by Dr. Roosa in a paper read before the Academy of Medicine last year.

As there is positive evidence that in a certain per cent. of cases, probably quite a small one, eye-troubles do cause neurotic symptoms, the present line of inquiry should be directed to discovering the conditions in which such reflex disturbances are produced.

POST-PARTUM TROUBLES IN AMERICAN WOMEN.

In a letter to the *American Practitioner and News* Dr. T. S. Galbraith reports an interview with Dr. Fancourt Barnes in which he asked why it was that there was so much difference between American and European surgeons with regard to the frequency of laceration of the cervix, and the need of an operation therefor.

Dr. Barnes said that from a large experience with all classes of patients, he was of the opinion that injuries following parturition were far more frequent in American than English or other European women. "He would account for this difference on the grounds of the defective physique of American women. This he thought was mainly due to the faulty educational methods prevailing in this country. During the period of rapid development our girls were kept too much in-doors, being confined to school too closely, and not allowed to indulge in the out-door sports that have a tendency to give tone and elasticity to the body. In these respects he thought the English girls had the advantage, as public sentiment allowed them to indulge in out-door amusements and athletic sports in common with their brothers. Hence they were able to attain superior physical development, and arriving at womanhood were capable of passing through the ordeal of maternity with comparative safety."

All this is very interesting but it fails to explain the matter entirely, because we have been told that American gynecologists probably operate proportionately quite as often upon foreign-born women as upon natives. Our maternity hospitals also show quite as small mortality rates as those of Europe.

We fear Dr. Barnes has not quite struck the root of the matter.

ONE OF OUR NATIONAL PERILS.

Statistics show that our foreign-born population furnishes the great proportion of our criminal and diseased population. This is particularly striking as regards insanity.

Dr. Foster Pratt estimates that the foreign-born, in 1850, were one-tenth of the population and furnished one-seventh of the insane; in 1860, were one-eighth of the population and furnished one-fourth of the insane; in 1870, and also in 1880, were one-seventh of the population and furnished nearly one-third of the insane. In other words, the foreign-born, from 1850 to 1860, had increased nearly one hundred per cent., their insane one hundred and eighty-one per cent.; from 1860 to 1870, the foreign increase was thirty per cent., their insane nearly one hundred per cent.; from 1870 to 1880, the foreign increase was less than twenty per cent., their insane one hundred and fifty per cent. The proportion of insane to the sane among natives in 1880 was 1 to 662, among foreign-born 1 to 250.

This country is being loaded down with the defective classes of Europe. None observe this fact or can appreciate it more keenly than medical men, and it is their clear duty to call attention to the matter and arouse the proper sentiments regarding it.

News of the Week.

Annual Meeting of the N. Y. Academy of Medicine.—On November 18th the anniversary discourse will be delivered before the N. Y. Academy of Medicine, by Dr. Wm. H. Draper. That meeting is public according to chap. i., sec. 3 of the By-laws. Special invitations will be sent to any gentleman or lady, whose address will be handed to the resident librarian of the Academy, for that purpose.

A Doctor's Suicide.—Dr. Ralph L. Stone, one of the house physicians at the King's County Hospital, at Flatbush, committed suicide on Friday, of last week, by shooting himself in the forehead. No motive for the crime could be assigned, other than over-study.

Dr. Stone was twenty-two years of age, a native of Pennsylvania, and was graduated from the University of Pennsylvania a year ago.

Death from a Button in the Trachea.—While playing in one of the city parks a small boy suddenly dropped down, and in a few minutes was dead. Post-mortem discovered a large bone collar-button tightly wedged in the trachea.

The Total Number of Army Invalids in this country is now 265,854. This is presumed to represent the invalid remnant of the million and a quarter of soldiers who came home from the war over twenty-five years ago. War is a very unhealthful occupation to have made a chronic invalid of one out of perhaps every four survivors.

Dr. Julius F. Miner died at his home in Buffalo, N. Y., last week, aged sixty-three years. He was well known as a surgeon and editor. He was born in Peru, Mass., in 1823, graduated at the Albany Medical School in 1847, and settled in Buffalo in 1855. He was for several years Professor of Surgery in the Buffalo Medical College, and editor of the Buffalo *Medical and Surgical Journal.*

Tait in Texas.—A local journal points with pride to the fact that Tait's operation has been done probably fifty times in Texas. At this rate the mothers of Texas will need soon a champion again.

Another Fast.—Europe is beginning to imitate America. We have had two fasters, one doing forty days and the other, if we remember rightly, forty-five. Now Señor Succi of Italy has fasted for thirty days, and Paris has just raised up a rival in the person of M. Stefano Merlatti who is to fast fifty days "under the supervision of physicians." If he succeeds, America will still be at least even in the famine line, while retaining a proud pre-eminence in the direction of high jumps and whirlpool swimming.

Conferring the Degrees of LL.D. by Harvard.—At the jubilee celebration of Harvard University, this week, the degree of LL.D. was conferred upon three physicians, viz.:

"Joseph Leidy, anatomist, biologist, a leader and exemplar among American naturalists, Professor of Anatomy in the University of Pennsylvania."

"Silas Weir Mitchell, physician, physiologist, author."

"John Shaw Billings, Surgeon in the United States Army, student and teacher of public medicine, medical bibliographer."

Women Candidates for Membership of the Philadelphia County Medical Society received their annual rejection at a stated meeting recently. There is getting to be something really Spartan and heroic in the tenacity with which this Society defends itself against the practices and opinions of the day. The Philadelphia County Medical Society will go down in history as an illustrious exponent of conservatism. But the Goddess of Liberty is enlightening the world, and everything yields finally to it—and to the nagging of women less divine but quite as persistent.

A Monument to a Medical Hero.—Subscriptions are being received by *El Monitor Médico* de Lima, for the purpose of raising a monumental mausoleum to the memory of Dr. D. A. Carrion, whose life was given to keep his countrymen free of that terrible plague, the "verruga." Dr. Jose Mariano Macedo has published an interesting account of this awful scourge, whose ravages and character may be likened to small-pox, and some time ago we gave our readers an account of Dr. Carrion's work. The subscription-list is headed by a contribution of sixty soles from the editors of *El Monitor Médico*, and among the names already published is that of the Secretary for War of Peru, Surgeon-General D. Juan M. Echeniqul.

The Guild of St. Luke in the United States of America.—"There will be a meeting of the Guild of St. Luke, the Evangelist and Physician, at Calvary Chapel, Fourth Avenue and Twenty-first Street, New York City, at 12 M., Friday, November 19, 1886. At 2 P. M. a public service will be held in the chapel, to which physicians and medical students of the regular medical profession who are communicants of the Protestant Episcopal Church, and priests and deacons of the same, are cordially invited to be present. Addresses are expected concerning the objects and working of the Guild, by Bishop Quintard, of Tennessee, and others. (Signed) W. Thornton Parker, M. D., Provost, Newport, R. I." The object of the Guild is to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy. Physicians and medical students of the regular medical profession who are communicants of the American Church Catholic, and bishops, priests, and deacons of the Church, are cordially invited to become members. The entrance fee is $1.00, and the annual subscription fifty cents.

Dr. Koch's Museum of Hygiene in Berlin has been opened.

Medical Schools of Ohio.—We are glad to learn that the medical schools are improving their facilities. A better and more uniform standard of education obtains, both among teachers and taught, than formerly existed. A larger proportion of students have academic or scientific degrees, or have had experience as teachers. The Western Reserve Medical College, in Cleveland, is erecting an elegant college building, with all modern improvements. The Cincinnati schools are thoroughly aggressive and progressive, having a decided advantage in the large number of sick poor that enter the City and Good Samaritan Hospitals for treatment. The Columbus Medical College, the diplomas from which the State Board of Health of West Virginia now recognize, has been justly restored to a position on a par with all reputable regular institutions. The new Mount Carmel Hospital adds to its strength and usefulness. Every State in the Union acknowledges the good standing of the school.

Cholera in Vienna.—Asiatic cholera has been slowly making its way northward in Europe, and at last it appears in Vienna. Months ago it began its march at Brindisi. Passing up the western shore of the Adriatic, it tarried for a time in Venice and passed eastward to Trieste and Fiume. From the head of the Adriatic it crossed to Buda-Pesth, on the Danube, and it now prevails there and in neighboring villages.

Death of Dr. Wm. H. B. Post.—Dr. Wm. H. B. Post, a son of the late Dr. Alfred C. Post, died last week after a lingering illness.

A Doctor Blackmailed.—The case of Dr. William H. Graham, charged with criminal assault, which was tried last week at Toronto, Canada, excited intense interest. The prisoner was in the enjoyment of a respectable practice in that city last summer, when Mary Bull, a domestic, made the charge against him. Miss Bull's story was to the effect that she went to Graham's office to be treated for rheumatism, when he assaulted her. The defence proved that it was a case of blackmail, and the jury returned a verdict of not guilty.

THE DEATH OF DR. LAUER.—Dr. Eugene Lauer died of diphtheria at his home, 308 East Fifteenth Street, this city, October 31, 1886, aged forty years. He was a native of Hessen-Darmstadt, Germany, received his early education at Giesen, and was graduated in medicine from the University of Marburg in 1868. He served as assistant surgeon during the Franco-German War, and came to the United States in 1873, settling in New York City as a general practitioner. Dr. Lauer was a close student, an acute observer, and worked devotedly in his profession to the close of his life. For the past twelve years he was an active member of the German Dispensary, class of internal diseases, and although enjoying a large and lucrative practice he was as prompt and punctual in his dealings with dispensary patients as he was known to be with his private *clientèle*, and was universally held in high esteem for his skill and devotion to his patients. In the death of Dr. Lauer the community suffers the loss of a practical and intelligent medical adviser. His colleagues, especially his dispensary associates, deeply deplore the premature death of one whose integrity of character, high professional attainments, and modest manners, won the respect and esteem of all.

"THE HOSPITAL" is the title of a new journal published in London, and announced as "an institution, family, and parochial journal of hospitals, asylums, and all agencies for the care of the sick, criticism, and news." Its first numbers contain some very creepy stories and poems, and a column of "humorous" things that make one fairly weep, as at the sight of decayed old age. Besides these, there are articles pertaining to nursing, the management of hospitals, etc.

THE LATE DOCTOR JAMES G. WAKLEY, editor of *The Lancet*, gave five thousand dollars on two occasions to the hospitals. It is, we believe, a very exceptional thing for medical men to contribute large sums to the hospitals, and Dr. Wakley's example is the more noteworthy on this account.

SURGICAL OPERATIONS AND BELLEVUE HOSPITAL.—We have no doubt that the surgical staff of Bellevue Hospital will be surprised to learn from the *Cincinnati Medical Journal* that letters of questionable taste are emanating from that institution and are being published in the daily papers of the West. "Some time since," says this *Journal*, "the people of this section were regaled with the details of a laparotomy done for gunshot wound of the intestines. Later the extraordinary dexterity of some laryngologist, as displayed in the removal of a laryngeal neoplasm, was extolled in such terms as to lead to the inference that there were no laryngologists except in New York, and none there but such as were connected with Bellevue Hospital. And now we have a string of stuff about a splenectomy." We are told that the descriptions are given with so much technicality as to lead to the belief that there must have been some medical reporter at work.

THERE IS TO BE A CONVENTION OF QUACKS.—All doctors who practise without diplomas are invited to a convention at Des Moines, Io., on November 16th.—*Sanitary News.*

MALE AND FEMALE MORTALITY IN THE UNITED STATES.—In the first ten years of life male mortality is the greater. From ten to forty it is less than that among females, from forty to eighty-five it is greater again; and after eighty-five it becomes less. In England, the only period of life when the female mortality is greater is between ten and thirty-five. England is apparently a relatively healthier country for women than the United States.

TORONTO has three medical colleges—two male and one female—as the local journal puts it.

IT has been announced, we believe correctly, that there will be a reorganization of the Jefferson Medical College. The office of Dean will be abolished, and those of President and Secretary be established—Professor J. M. DaCosta, to be President, and Professor J. M. Holland, to be Secretary of the Medical Faculty. Professor Roberts Bartholow, the present Dean, will resign. —*Medical and Surgical Reporter.*

THE INTERNATIONAL SANITARY CONGRESS will open in Vienna in September, 1887. Crown Prince Rudolph and Prime Minister Von Taaffe are to be its presidents.

FEEDING INFANTS.—Dr. R. P. B. Taafe, president of the Section of Public Medicine of the British Medical Association, says in his address, that the infant on the bottle should be fed only once in three hours during the day and twice at night. The proportions of cow's milk and water up to the third month should be as one to two; from two to four months, milk and water in equal parts; from four to seven months, milk two-thirds, water one-third. A dessertspoonful of milk and sugar is to be added to each bottle. Dr. N. S. Davis, in the *Journal of the American Medical Association*, editorially criticises these directions, and says that the food thus given would be insufficient for the infant's growth. Dr. Davis's views as to the insufficiency of this diet are of interest, since the prevailing opinion is that babies suffer more from stuffing than from starvation. Bottle-fed babies, one, two, and three months old taking food every three hours will consume probably more than Dr. Davis's estimate of thirty-two ounces of milk in twenty-four hours. Assuming, however, that this amount of diluted cow's milk (which contains thirteen and a half per cent. of solids), is taken, the daily amount of solids would be about 46 grammes. If now the child took milk from the breast, during its first months of life it would get only from 500 to 752 c.ctm., or from a pint to a pint and a half of milk daily. This milk contains only about 10.5 per cent. of solids, and the child would thus get from 50 to 75 grammes of solids. Dr. Davis's figures are correct, therefore, for the first two months in life, assuming that the child takes only the thirty-two ounces daily. After the second month, however, the mixture of equal parts of cow's milk and water, with the addition of sugar of milk ought to furnish sufficient nourishment to the child, viz.: over 80 grammes daily. Children in the middle of the first year take about 1,200 to 1,300 c.ctm. of milk daily, according to Vierordt.

A NEW ANÆSTHETIC used by dentists, the Raoul-pictel disinfectant fluid, has the formula CSO_4. It has a very offensive sulphurous odor, according to Dr. J. E. Clark in the *Medical and Dental Journal.*

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 4, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE KRACKOWIZER PRIZE.

THE PRESIDENT announced that the subject for this prize was "New Observations on Osteomyelitis." The contributions must be handed in on or before January 1, 1889.

THE MOVEMENTS OF THE HEART AND THE INTESTINES ILLUSTRATED BY PHOTOGRAPHY.

DR. WILLIAM GILMAN THOMPSON read a paper on this subject, it being an additional contribution to the articles published in THE MEDICAL RECORD, March 14 and September 4, 1886, and elsewhere.

He first showed the photographic apparatus by which he was enabled to take six views per second of the heart or other object in motion. The photographs illustrated the normal pulsating heart taken in full systole and diastole, and the various intervals between. These he compared with the modifications in the movements of the heart produced by various stimuli—thermic, mechanical, and chemical. The pictures showed very accurately the effects of drugs upon the heart. The animal experimented upon was anæsthetized, a collar of white celluloid was slipped behind the heart for the purpose of obtaining a bright background, and the experiments were then begun. Some of the animals experimented upon were kittens, rabbits, rats, pigeons, dogs, lizards, and calves.

The shape of the hearts varied very considerably, but generally the longitudinal diameter exceeded the transverse one-fourth when in diastole. The movements and alterations in the form of the heart were determined principally by the thick-walled left ventricle. The most important of his later observations were:

First, that the base of the heart descended very little, if at all, in systole in most animals.

Second, it was a question among physiologists whether the long diameter of the heart shortens in passing from diastole to systole. The photographs showed much variation in this matter, but in most animals there was slight shortening. In the pigeon there was slight elongation. The transverse diameter was shortened usually twice as much as the longitudinal in full systole, and it was uniform from the base to the apex, unless interfered with by drugs. The anterior-posterior diameter was uniformly elongated by about one-eighth.

Third, the apex was uniformly tilted forward, upward, and to the right. The rotatory movement of the heart from left to right on its long axis occurred in excised hearts as it did in hearts *in situ*.

Fourth, the right ventricle lay so much higher, and was so much thinner than the left, that it had much less influence on the shape and movement of the heart, especially at the apex.

Fifth, it was a question in physiology whether the apex-beat was due to the thrust of the apex against the chest-wall or whether to pressure of the hardened anterior wall. The photographs showed that in some cases the apex-beat was due to impulse of the apex itself against the chest-wall, in others that it was due, to a greater or less degree, to the impact of the anterior wall of the heart. We could not be certain which took place in man.

The apex, as well as the whole contour of the heart, was greatly modified by drugs. Drugs whose action was to increase the systole tended to make the apex sharper, while drugs whose action was to lengthen diastole tended to make the apex blunt and round; and if in this condition an antagonistic drug be applied, the apex as well as the whole contour of the heart usually remained much more rounded.

The surface of the heart in all the changes in size from full systole to full diastole was smooth, but it became more or less irregular by various stimuli.

The right ventricle showed greater vitality than the left, as it attempted to contract when the left had ceased to do so. The auricles contracted but very little in systole.

The photographs showed that the auricular systole overlapped the ventricular in point of time.

The extent of the movement of the heart, as a whole, bore no definite relation to its size; it depended upon the suddenness or force of the systole, or amount of work of the heart.

He thought the coronary arteries received blood during diastole, and perhaps also during systole.

The photographs showed that the contraction of the circular fibres of the heart was uniform and symmetrical. The papillary muscles were shown to have independent contractile power.

Of the stimulants which he had applied to the heart, the strongest was heat. Of the chemicals, Glonoin seemed to be the most active. Chloral produced marked diastole.

Dr. Thompson also exhibited photographs of the intestines, which showed that there was peristaltic action both toward the pylorus and toward the anus, also contraction on irritation, producing stricture to a greater or less extent, also pendulum movement of the intestines. All these motions were frequently observed to take place simultaneously.

The paper was discussed by Dr. A. H. Smith, and by the President, who expressed satisfaction at such accurate and valuable investigations made in this country.

DR. W. GILL WYLIE then read the following paper:

SIX CASES OF LAPAROTOMY—INTESTINAL OBSTRUCTION, PERITYPHLITIS, AND TUBERCULAR PERITONITIS, WITH REMARKS.

Out of sixty-seven laparotomies operated upon since June, 1885, I have selected six cases that are not gynecological to report. Gynecologists have lately done their part in advancing abdominal surgery, and their large experience in seeing and examining the peritoneal cavity of living women gives them some advantages over the general surgeon in dealing with any kind of abdominal tumors. On the other hand, the gynecologist who is not a good and well-trained surgeon would be wise in keeping his hands out of the peritoneal cavity. I would much rather risk a good surgeon in an ovariotomy than a gynecologist without surgical training.

LAPAROTOMY FOR COMPLETE INTESTINAL OBSTRUCTION.

Mrs. O——, fifty years of age, married; has had three children and one miscarriage; last pregnant twenty years ago; menses ceased four years ago. She was always a delicate woman. Eleven years ago a fibroid tumor was discovered, and examination with a sound caused a violent attack of peritonitis. She was many weeks in bed, and more or less bedridden for a year. Since then she has had great trouble in getting her bowels moved and has not been strong. She had not felt as well as usual for several months past. Previous to October 6th she had more or less abdominal distention with colicky pains. On that day she took an unusually long walk, and during the night a violent colic with vomiting came on. Half a grain of morphine was given hypodermatically and half a grain by mouth before she was comfortable. The vomiting continued, but no movement could be forced by simple laxatives and enemas. The pain was such that half a grain of morphine was given every six hours. Ox-gall enemas failed to cause a movement.

October 9th, Dr. Fessenden N. Otis asked me to see the patient with him and Dr. Ward, the family physician.

After getting an outline of the above history I saw the patient. She was quiet. Pulse 85 and temperature 99°. She seemed very listless. Abdomen distended, but not very tense; the outline of distended intestines could be plainly felt and seen through the thin abdominal walls. The material vomited was dark and shreddy in appearance, but was not stercoraceous. My diagnosis was intestinal obstruction. Dr. Otis agreed. Purgative pills were ordered to be given and turpentine and ox-gall enemas used, and every effort made to secure a movement, without injuring the patient, for twenty hours. If no movement or gas was secured, laparotomy was advised.

October 10th.—Patient's condition about the same, but the listless condition was more marked. The pupils were not contracted, but she was drowsy and heavy. As had been the case for four days, the slightest thing given by the mouth caused vomiting. The abdomen was less distended, but not even gas had been passed per rectum.

The patient was etherized by Dr. N. D. Jones, and, assisted by Dr. R. H. Wylie and Dr. M. Crandall, I proceeded to operate, in the presence of Drs. Otis, Ward, and others. I made a small incision in the median line and introduced my index-finger. I broke up several peritoneal cysts, from which escaped ten or twelve ounces of reddish serous fluid. The pelvis was filled by a large uterine fibroid, and the intestines were adherent to the upper border. One of the peritoneal cysts pressed directly on the descending colon, but I was not satisfied that it was sufficient to account for the intestinal obstruction. While making further examination on the right side, near the ileum, I discovered a mass of intestines rematted together, and at first thought it a malignant growth. The incision was extended seven or eight inches. Chocolate-colored intestines bulged up through the incision. Most of the intestines were then turned out of the abdomen and covered with towels wrung out in hot water. The cause of the obstruction was easily brought into view. A loop of the ileum some distance above the cæcum had been drawn down and firmly bound to the side, deep in the pelvis, by a band or cord of lymph as thick as a lead-pencil. Above this point there was great distention from complete occlusion of the lumen of the gut. For a space of an inch and a half around the adhesion the intestine was black from congestion and extravasation. I put the band on the stretch, caught it with pressure-forceps, tied the end attached to the pelvis, and cut between ligature and forceps. The loop of intestine at once sprang up in place and it was evident that the lumen was free. A careful examination showed no slough, but the intestine at the point of adhesion was so black that for a time we were in doubt. There were numerous other bands, but none constricted the intestines. At one or two points the intestines were flattened by adhesions on the surface of the fibroid. These were loosened. The fibroid involved the uterus and both broad ligaments, and would have been difficult to remove. As it was evidently undergoing atrophy it was not disturbed. The intestines were with considerable difficulty replaced in the abdomen without any puncturing for the escape of gas. The wound was closed in the usual way and an antiseptic dressing applied. After the operation an enema was given and some dark fluid came away. Ten hours later the patient had a copious liquid stool. There was some reaction, but the highest temperature was 101°. The vomiting ceased and she had very little pain. She has made an uninterrupted recovery, and now has less trouble with her bowels than at any time for ten years. It is probable that there had been more or less obstruction since the first attack of peritonitis, and that the attack of October 6th was due to complete occlusion of the lumen at a point where there had been for years more or less obstruction. The absence of severe or alarming subjective symptoms was partly due to the fact that the patient's condition was not aggravated by too much medication, but the contrast between a normal pulse and temperature, etc., and the critical local condition found when the abdomen was opened was indeed very marked.

Remarks.—This case goes far to confirm my belief that some of the cases heretofore called peritonitis without fever have been in reality cases of intestinal obstruction. I am satisfied that intestinal obstruction occurs after laparotomy for the removal of tumors, etc., more frequently than is recognized. Most of these nature overcomes, and the patients recover; but many cases with vomiting and abdominal distention have died from intestinal obstruction that have been treated for peritonitis. Until very recently, laparotomists followed the orthodox practice of keeping the bowels quiet after laparotomy, and gave opium as in peritonitis, and left the bowels constipated for five or six days at least, no matter how much tympanites and vomiting there might be. I am not yet ready to go as far as one laparotomist, and say that a brisk purgative will stop peritonitis or sepsis; but, from experience, I am certain that it is safe to give turpentine or ox-gall enemas for tympanites after twenty-four or forty-eight hours have elapsed after laparotomy, and that an early movement of the bowels will, when indicated, relieve abdominal distention, stop vomiting, and often lower a rising temperature. It is plain that intestinal obstruction would be more likely to occur, or, at least, become more complete and difficult to relieve, if time is given for the adhesion to strengthen and contract. I have now adopted the plan of moving the bowels any time after twenty-four hours, whenever indicated by tympanites, vomiting, or rise of temperature, and on the third or fourth day in all cases after laparotomy.

INTESTINAL OBSTRUCTION BY LYMPH-BANDS.

L. S——; aged twenty-five, widow, admitted to my ward in Bellevue, May 21, 1885. Menstruates regularly, but with some pain. Had one miscarriage six months ago; since then she has had dragging pains in back and in both iliac fossæ. She has more or less swelling on left side of abdomen, and for many weeks past has been obstinately constipated and became very much swollen. She has had some fever and tenderness. Her appetite is poor and she is very weak. The uterus is more or less fixed by adhesions, but the distention of abdomen prevents a satisfactory examination. She was kept in bed and every effort made to regulate bowels.

June 28th.—There being no improvement, abdominal incision was decided upon. The usual median incision was made. Extensive adhesions were found involving intestines and omentum. A mass of indurated tissue partly filled the left iliac fossa. It was smooth and involved the broad ligament. There was nothing to indicate where the tubes and ovaries were. Some inguinal and mesenteric glands were distinctly enlarged, and a diagnosis of syphilis or malignant disease was made. In searching for the cause of the intestinal obstruction some very firm bands of lymph were found constricting the colon just above the sigmoid flexure. These were broken up and the abdominal wound closed. Patient had slight rise of temperature, but her bowels moved without difficulty and the abdominal distention disappeared, and August 3d she was discharged well, having gained flesh and color, and appeared perfectly healthy.

OPERATION FOR PERITYPHLITIS.

W. B——, twenty-two years of age, negro, admitted to Bellevue August 23, 1885. In the absence of Dr. E. D. Hudson, Jr., the attending physician, I was asked to see the case August 24th. Two weeks previously he had had some pain in right iliac fossa; it was colicky in character and it steadily grew worse. Since then bowels have been irregular and constipated, and for the past week abdomen has steadily grown larger. Three days ago he had a severe chill, followed by great local pain and high fever. Since then he has had several slight chills, and now has a temperature of

103°. At times has profuse sweating. The abdominal wall near the crest of the ilium, for a space of several inches, is indurated (not boggy), and there is some dullness on percussion, but is not very well marked. From the subjective symptoms and the indurated feel I diagnosed suppurative perityphlitis, and proposed operation. Dr. Janeway and Dr. L. A. Stimpson saw the case with me, but both thought an operation was not indicated. Later in the day the late Dr. McBride saw the case and agreed with me as to advisability of operation. Selecting the point of greatest induration and dulness, a little below the crest of the ilium, I made an incision through the skin and muscles about three inches long. The muscles were not at all œdematous, but were grayish in color. I was careful to open the abdomen at the point where adhesions of the peritoneum to the abdominal wall were indicated. As I reached the peritoneum it was forced up through the wound by the great intra-abdominal tension, and when it was punctured stinking pus and gas escaped in a strong jet, and about ten ounces of pus was evacuated. The opening was carefully enlarged and the cavity examined with the index-finger. The intestines were firmly matted together about the cæcum, but no foreign body was found. The cavity was washed out with bichloride solution, 1 to 5,000, a double drainage-tube introduced and the wound closed around it. The cavity was occasionally washed out for a few days and as it closed the double tube was gradually shortened. Recovery was complete in three weeks.

EXPLORATORY INCISION—TUBERCULAR PERITONITIS.

Mary C——, thirty years of age, married; five children, one miscarriage. Menstruation normal before marriage but painful afterward. Has not menstruated since last pregnancy, two years ago. During last lactation had epistaxis monthly. For last year has had attacks of pain in the abdomen, and four months ago noticed a small tumor in left inguinal region, which has increased up to now. She has become emaciated in last three months. There is a large mass which extends above the umbilicus; no tympanitic sound can be obtained anteriorly, and it is undoubtedly largely fluid. After preparatory treatment the patient, who had improved, was operated upon April 12, 1886. As soon as the peritoneum was opened about two quarts of a yellowish but nearly clear fluid escaped. After breaking up many adhesions a semi-solid mass presented, dotted here and there with numerous grayish-white nodules a sixteenth of an inch in diameter. The tumor or mass was aspirated with a fine hypodermatic needle several times, but no fluid was obtained. After loosening up some more adhesions in order to find out, if possible, the nature of the mass, it was finally decided that it was tubercular in nature, involving the intestines, etc. Two drainage-tubes were put in and the cavity closed. The patient recovered and was discharged May 1st, very much improved in her general condition. Several of the nodules were removed, but the pathologist came to no definite conclusion as to their nature. After leaving the hospital the patient enjoyed better health for about a month, but her abdomen increased in size, and eventually a sinus was established in the scar of the wound, which discharged a yellowish flaky fluid. Her temperature during this time ranged between 102° and 104°. Finally there was ulceration into the intestines, and the patient died about the middle of July, 1886.

TUBERCULAR PERITONITIS.

Kate McG——, fifty-four years of age; had five children. Menses stopped about three years ago, but for several years before that she had suffered much from menorrhagia. Parental history negative. For about two months she has had no appetite and has been drowsy, and five weeks ago she noticed a swelling in the hypogastrium. After one week there was some pain. There is a diffuse enlargement of the abdomen which gives a fluid wave on palpation. The distention very great and walls look as though they might slough; no tympanitic sound is obtained by percussion anteriorly. Abdominal section.

May 26, 1886.—On opening the peritoneum there was a gush of clear, greenish, but viscid, fluid. On introducing the finger the uterus could easily be felt and mapped out, showing that the fluid came from the peritoneal cavity. There were numerous adhesions between the intestines, omentum, and parietal peritoneum; numerous small nodules indicate tubercular disease. The cavity was washed out with mercuric bichloride (1 to 10,000) and a drain inserted. Temperature remained subnormal for twelve hours, but the patient slowly recovered.

June 22d.—General condition better. There is a slight serous oozing from a small sinus in wound, but patient is discharged at own request in an improved condition.

EXPLORATORY INCISION.

Ann L——, Irish, aged seventy-four, widow, admitted October 22d. About three months ago abdomen began to enlarge on the left side, and one month later on the right. This has been accompanied by general abdominal pains. During last few days it has increased very rapidly. Abdomen is so distended with fluid that palpation gives no results. Patient is slightly jaundiced, but no history of stomachic trouble can be obtained.

October 23d median incision was made. When peritoneum was reached, trocar was carefully introduced into abdomen, and about three gallons of serous fluid, slightly bile-stained, were drawn off. After this nodular masses in liver and omentum could be felt and diagnosis of cancer was made. Patient recovered well from operation. Abdomen began rapidly to enlarge again.

October 26th she was discharged at her own request, improved.

In Germany permanent drainage in tubercular peritonitis has been lately recommended and practised. These two cases were certainly improved by opening and draining as long as there was any fluid to escape. The irregular feel of the mass—parts being firm, others elastic and yielding—are somewhat characteristic. The almost complete fixation of the intestines by adherent and thickened mesentery accounts for the absence of tympanites anteriorly. Since we have learned the great importance of perfect cleanliness and the proper use of antiseptics, exploratory laparotomy is less dangerous than tapping in doubtful cases of abdominal tumors. The trocar probably has been of some service, but in the light of to-day, so far as abdominal tumors are concerned, many useful lives would be saved if there were no such thing as a trocar.

To-day a physician from Central New York brought to me a woman enormously distended with an ovarian tumor, and said she had been tapped six times, and she is now so bad he had refused to tap her again. He spoke of two other cases at home; from one of these a doctor had drawn seven hundred and fifty pounds of fluid in about twenty tappings.

He also said: "You cured one tumor case from our county last year, and if this one gets well, we will have you come up and operate on one that is too sick to be moved." The case he referred to had been tapped ten times, and was so feeble that it was only by the greatest care and good luck that she recovered.

Last week I was called to Cooperstown, N. Y., to see a case of puerperal convulsions. While there I was asked to see a lady suffering from a large tumor. A New York doctor had, several months ago, pronounced it a cystic tumor of the liver that could not be removed, etc. Dr. Crane, of Richfield Springs, was called, and had diagnosed ovarian tumor, but thought her too weak to operate upon. She had been tapped four times. I telegraphed for one of my assistants and instruments, and removed a suppurating ovarian tumor of eighty pounds. The patient had a very feeble pulse—120 to 140—and some septic fever, but she is still alive, now on the sixth day after the operation.

As long as these unfortunate women are tapped, they will not seek those prepared to operate upon them and give them the only chance for permanent relief, except by death. Laparotomists in this country can never get as good results as operators in Europe until doctors stop this miserable, mistaken, and murderous practice of tapping abdominal tumors. If they would refuse to give temporary relief by tapping, it would be an easy task to persuade the patient to consent to an operation, which, if done early by an expert, would save at least nineteen out of twenty. I am fully aware that the patients themselves or their relations are often intractable, and that until very recently the death-rate after laparotomy in this country has been very great.

THE ANNIVERSARY ADDRESS, NOVEMBER 18, 1886.

THE PRESIDENT announced that the anniversary address would be delivered at the next meeting by Dr. William H. Draper. He also spoke of the necessity for a new building, and said a sum of two hundred and fifty thousand or three hundred thousand dollars would be necessary to commence it. In addition to the gifts to the Academy recently announced, there would soon be a donation of seventy thousand dollars. The importance of establishing a building fund was apparent, and when he put Dr. Agnew's motion to establish a building fund, it was unanimously carried.

The Academy then adjourned.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE EQUINE ORIGIN OF TETANUS—THE ANALOGY OF TETANUS WITH CHOLERA—THE FUTILITY OF SPECIFIC TREATMENT—THE HINDOO METHOD—THE DISEASE INFECTIOUS IN THE HORSE AND IN MAN—HORSE-MEN VERY LIABLE TO THE DISEASE—THE INDICATIONS AND CONTRA-INDICATIONS OF LITHOTRITY—DR. POZZI DECORATED.

PARIS, October 27, 1886.

THE Congrès François de Chirurgie held its First Annual Meeting on Monday, the 18th inst., under the presidency of Professor Ollier, the well-known surgeon of Lyons. It took place in the large amphitheatre of the Paris School of Medicine, and was well attended. The papers that were read on that occasion were of varying interest, but it is impossible, within the limits of an ordinary letter, to do more than refer to some of them. The novel theory of the equine origin in the etiology of tetanus in the human subject, lately propounded elsewhere by Professor Verneuil, was developed by Drs. Thiriar, of Brussels; Doyen, of Rheims; Larger, of Paris, and by Professor Verneuil himself. Dr. Blanc, of Bombay, is not only in favor of this new theory of the etiology of tetanus, but, he finds in it, curiously enough, an analogy with Asiatic cholera in its origin and pathogeny. The author founds his theory on sixty cases of tetanus observed by him at Bombay, where the disease is said to be very prevalent. He pushes the analogy between the two affections still further, by comparing their symptomatology and the seasons of the year in which they occur, at which time they reign simultaneously.

With regard to the prevalence of these two affections, the author divides the year, at Bombay, into three seasons: The cold season, from October 15th to March 15th; the hot season, from March 15th to June 15th; the rain season, from June 15th to October 15th. Tetanus reigns principally at the height of the hot season, in the month of May. It appears with equal frequency during the hot seasons which interrupt the tropical rains, and it is also at these divers periods that the cholera is developed. At Bombay, according to the same author, three distinct forms of tetanus are observed: Acute or hyper-acute tetanus, which lasts three days on an average and carries off the patient with a temperature raised as high as 108° to 110° F.; subacute tetanus, which proves fatal between the tenth and twelfth days, by respiratory spasm ordinarily. The temperature in these cases is irregular in character and does not augment progressively. It may remain low. Chronic tetanus lasts from thirty to sixty days, and remains apyretic. Acute tetanus is always fatal, the subacute often; chronic tetanus ordinarily cures. As regards treatment, Dr. Blanc stated that he had tried all kinds of drugs without finding a single specific. Some of those in ordinary use in such cases, such, for instance, as the bromide of potassium, particularly when the latter is given in large doses, are dangerous, whilst others are inefficaceous. All he does is to isolate the patient for quietude and to give him a little chloral to calm him. The rest of the treatment consists more in diet than in medication.

The Hindoo doctors pay great attention to the bowels, and treat their tetanic patients with purgatives, and, it is said, with success. He is quite in accord with Professor Verneuil as to the equine origin of tetanus, and observed that at Bombay the disease is as frequent among horses as among men, and that the propagation of the malady is effected as much through the organism intact as through an external wound. The pathogenic origin of tetanus, as of cholera, resides in the water. Both the diseases are produced in the hot season, when, the wells being dry, infiltration takes place from the neighboring soil, the water of which contains the microbes or germs of these affections, and those who drink of this water drink tetanus. In fine, concludes the author of this remarkable paper, in closely studying the symptoms of tetanus and cholera, one would find more than one striking analogy between them, and he puts the question, Whether the muscular cramps of tetanic patients are not identical with those of patients suffering from cholera? I may here recall Professor Verneuil's theory, who reiterated the opinion expressed by him in a recent issue of the *Gazette Hebdomadaire de Médecine et de Chirurgie*, that tetanus was certainly infectious in the horse and also in man, and that the disease is transmissible from the horse to man. He adduces the following reasons in support of his opinion: 1. It is a common thing to hear of men living in contact with horses suffering from tetanus and dying of the disease. 2. Tetanus in man results oftenest from injuries caused by horses. 3. Horse-dealers, grooms, and stable-men are more often than others the subjects of this malady. 4. Wounds in contact with a soil contaminated by the dejections of horses are more often followed by tetanus than others.

Dr. Reliquet read a paper at the same meeting on the indications and contra-indications of lithotrity, which may be summed up as follows: As regards the stone, its hardness and size are considered contra-indications. With regard to the urinary passages, certain pathological conditions, such as induration of the urethra, oppose the introduction of the catheter. Concerning the bladder, the state of this organ is very important to consider in regard to the contra-indications—the form in cul-de-sac of the bottom of the bladder, the immobilization of the stone between folds of the mucous membrane or against the parietes of the organ. The flattening of the stone must also be taken into account, some of them being of the form of a cake and are most difficult to grasp. The author then formulates the general conclusion thus: When the stone is not movable lithotrity must not be thought of.

The last meeting of the present session was held on Sunday last and, as usual, was wound up by a banquet in the evening. There are several other papers worthy of notice abstracts of which I shall send you in my next.

As a graceful compliment to the French Surgical Con-

gress Dr. Pozzi, the General Secretary and originator of the Society, has been created Chevalier of the Legion of Honor.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE LONDON SCHOOLS—THE LATE MR. SAMPSON GAMGEE—EXPULSION OF A MEMBER FROM THE COLLEGE OF SURGEONS—MEETING OF MEMBERS—HARVEIAN ORATION—OPENING OF THE MEDICAL SOCIETY OF LONDON—PRESIDENT'S ADDRESS—SOCIETY OF OFFICERS OF HEALTH—DR. ALFRED HILL'S ADDRESS.—THE LIGATURE OF ARTERIES—EXTRA-UTERINE FŒTATION—THREE HUNDRED CASES OF OVARIOTOMY—MODERN MIDWIFERY FADS—THE COUNCIL ELECTION.

LONDON, October 23, 1886.

THE new entries, so far as ascertained, are below the average, and many of the teachers seem lugubrious about it. At the London Hospital there is an actual falling off, although a magnificent new college has been built, and provided with all the modern improvements for study. Guy's is little better off, and University College has fewer entries than St. Thomas's or St. Bartholomew's. The last leads the way with a total of 138 students, of which 125 have entered for the full course. While London teachers lament, Scotch I suppose will be rejoicing, and the little school of Newcastle-on-Tyne is continually increasing its students on account of its being connected with the University of Durham. Unless our London professors make a stronger effort to enable their students to obtain the title of "Doctor," this migration will still go on.

The recent death of Mr. Sampson Gamgee is greatly to be deplored, for he is much missed at the present crisis, as he was one of the ablest and most zealous medical reformers. He was also an accomplished linguist, and a trusted contributor to the *Lancet*. He entered with great zeal into various philanthropic enterprises, and was the originator of the "Hospital Saturday Movement." His fame as a surgeon will be known well to your readers.

The College of Surgeons has removed the name of a member named Alabone from its list, on account of the disgraceful advertisements which he issued. The college has seldom exercised this power, although the council has often had its attention directed to advertisements still more discreditable. Generally speaking, the council troubles nothing about its members after it has extracted the fees for admission. Perhaps they are about to assert that the action of the members reflects credit or discredit upon the college. Such a conclusion will give increased impetus to the demand of the members for representation. In respect to this last demand a meeting of fellows and members is to be held next month, when the question of the position of members, their rights and privileges, will be discussed.

Last Monday the Harveian oration at the College of Physicians was delivered by Dr. Pavy. This oration is delivered annually in accordance with the condition on which Harvey conveyed the gift of his estate to the college. The orator is required to commemorate all benefactors of the college and to exhort others to imitate them, with further exhortation "to search and study out the secrets of nature by way of experiment." Dr. Pavy, accordingly, commenced by noting a recent addition of income, raising the Croonian endowment from £10 to £200, and stated the manner in which the college has determined to expend this money. We are to have more Croonian lectures, and such sums as the college thinks fit are to be applied to the promotion of scientific investigation. The orator then stated that the late Dr. Gavin Milroy had bequeathed £2,000 for the purpose of founding a lecture on State Medicine and Public Hygiene, and he has left behind him an elaborate code of suggestions for the council of the college in the administration of his trust. Dr. Pavy then addressed himself to the exhortation to experiment. He began by placing before his hearers a view of Harvey's own method of work, and followed this up by an account of recent experimental researches. We were carried through clouds of microbes and the diseases they are believed to produce, on to Pasteur's last great experiment with regard to rabies. Here, of course, there is more uncertainty at present, for the microbe of rabies has not been isolated, still less cultivated, and Pasteur's views are by no means generally accepted. Other great experimenters have not confirmed them, and the professional mind seems to be waiting the result of the huge experiment which is being carried on. Dr. Pavy told us he had witnessed Pasteur's work in Paris, and though he did not venture to deny that our judgment is for the present very properly suspended, he said that the results tell decidedly in favor of Pasteur's view.

On Monday evening the Medical Society of London commenced its meetings with an interesting and eloquent address by the president, Mr. Bindwell Carter. He has always something fresh and striking to say, and he delivered himself of a contrast between the other professions and medicine in a charming and agreeable manner. The contentions of lawyers, he said, might conduce to acuteness of perception, but not to the discovery of truth. Theologians of various creeds disputed about the meaning of words, producing, as Dugald Stewart said, "a lively curiosity to know what is said, without a corresponding desire to know what is true." Politicians urged their followers to place confidence in public men in whom they had themselves long lost their confidence. The time cannot be distant when the medical profession will be acknowledged to have shown the right path of mental training, for Mr. Carter held that the study of medical science is calculated to ennoble the moral as well as the intellectual being of man.

Dr. Alfred Hill presided over the first meeting of the Society of Officers of Health, and devoted his address to a consideration of the various methods of disposing of sewage and house refuse. He believes that all intercepting or conservancy methods are false in principle, and on a large scale hurtful in practice; that the water carriage system is to be preferred to every other for convenience, health, and economy; and that where it is impracticable, the system providing the most complete absorption and deodorization should be preferred.

LONDON, October 30, 1886.

AT the last meeting of the Clinical Society a discussion took place as to the ligature of arteries and the material to be employed for ligatures. No unanimity of opinion prevailed, but it seemed clear, from the experiments of Messrs. Ballance and Edwards, that the internal coats of the artery need not be divided. Mr. Thomas Smith thought that they were not divided when kangaroo tendon was used. In ligaturing an artery he applies two ligatures and divides the artery between, following in this the practice of Celsus, Galen, Paulus, Ægineta, and Ambrose Paré. The clove hitch, he said, could make a very firm knot.

At the meeting of the Royal Medical and Chirurgical Society, on Tuesday last (October 26th), a unique case of extra-uterine gestation was described by Dr. Gervis, Obstetric Physician to St. Thomas' Hospital. Before admission the patient had suffered from severe pain in the abdomen, and there had been offensive discharges from the vagina. There had been no uterine hemorrhage. On examination an ill-defined swelling was found in the hypogastric region. The lower segment of the uterus appeared to be expanded and fixed. Offensive discharge, consisting of muscular tissue, etc., was going on from the vagina, and the shaft of a fœtal tibia was subsequently passed. On examination *per vaginam* the

decomposing body of a small fœtus was found transversely wedged in the uterine cavity. It could not be extracted. The patient died, and on post-mortem examination it was found that there had been an extra-uterine gestation occupying Douglas' pouch. The sac was found to communicate both with the small intestine and the uterus. The discharge of portions of the fœtus through the uterus had caused a doubt to be thrown upon the diagnosis first made, as it was unique for the sac to burst into the uterus.

Mr. Knowsley Thornton then read a paper on "Ovariotomy," in which he detailed the histories of three hundred cases. Some discussion followed the reading of the paper.

Sir Spencer Wells, alluding to the fact that among Mr. Thornton's cases there were only nine in which the Fallopian tubes were diseased, said this confirmed his own opinion that tubal disease was rare. Mr. Alban Doran referred to the tapping of cysts in the broad ligament, and said he thought it was not justifiable. Dr. Playfair said the spray was not a necessary adjunct to antiseptic ovariotomy, but its use involved the complete and minute carrying out of antiseptic precautions, and in this consisted its value. Dr. Gervis, alluding to the plan of washing out the peritoneum with water, said that it originated with the Americans, who even anticipated the Germans. Mr. Thornton briefly replied. The use of the ice-cap and of cold sponging he considered to be of great value for keeping the temperature within bounds, but antiseptics had greatly lessened the need of them. Drainage-tubes were valuable, but he had never found the reopening of a wound, with the insertion of a drainage-tube, to be successful. He did not believe in tapping simple cysts. The spray was useful, and washing the wound out with water was very valuable. In cases of pyo-salpinx the hot water broke up the little particles of matter lodged in various corners and crevices, and the resulting atoms were easily absorbed or dispersed.

The third stage of labor cannot be said nowadays to lack attention, for some disciples of obstetrics would fain have us believe it merits even more care and notice than the preceding stages. Of late years British obstetricians, at any rate, have taught clearly the importance of paying due attention to this stage. Some of the younger teachers of obstetrics in London are now urging the importance of making a minute and careful examination of the after-birth in all cases of labor. This is to include not only an examination of the placenta to ascertain its entirety, freedom from disease, size, and weight, but also the exact position of the spot at which the cord is attached, the position being exactly ascertained by measurements when the attachment of the cord is eccentric.

The greatest thickness of the placenta is to be ascertained, and a record taken of the position of the site at which the thickness is greatest. The length of the cord, absence or presence of knots, and normality of its surface are to be ascertained. The membranes are to be examined as to entirety, site at which rupture occurred, nature of rupture, smoothness, and freedom from disease. I understand that at one lying-in hospital in London (the General Lying-in Hospital, York Road, Lambeth) all these particulars are religiously obtained in every case of labor, and a record taken. To ordinary practitioners such minutiæ must appear needless and absurd, and they are not likely to adopt the views of the new school. I presume the visiting physicians to the hospital in question (Drs. Champneys and John Williams) cannot be overburdened with private practice, or they would be able to rise above such trivialities.

Canvassing is still actively going on by the numerous candidates for the three seats in the Medical Council. A curious feature of the election is that some fresh candidates are coming forward at almost the last moment. A very discreditable feature is the unfair use which has been made of the machinery of the British Medical Association to advance the interests of certain candidates. Although the Brighton meeting refused to allow the council to constitute itself a caucus for the selection of candidates the council has passed an official resolution favoring the candidature of two of their own number, and this resolution is prominently advertised in their journal. After what passed at Brighton no *official* action, at any rate, should have been taken.

THE LONG-BEARD HABIT.

To the Editor of The Medical Record.

SIR: It appears to me that your correspondent, Dr. R. J. Curtiss, lacks the sense of humor and of proportion. In his argument for beards he seems to lay most stress upon the question of diverting physiological energies, and says nothing about the serious aspect of the long beard, viz., its power of carrying contagion. I fully agree with your editorial upon this point. Long beards are dangerous as infection-carriers. I am sure that I know of several cases in which infective fevers have been carried by their means, and I think that every physician in large general practice must know of similar cases. I trust you will renew your attack on the long beards until they are shortened or cut off. Yours,

SANITAS.

THE TREATMENT OF VARICOCELE.

To the Editor of The Medical Record.

SIR: I have read with much interest the article by Dr. R. F. Weir on "The Treatment of Varicocele," read before the New York Academy of Medicine, and published in your journal of March 20, 1886. During the past ten years I have made a special study of the disease and its treatment, and have practised nearly all the operations suggested or named by the author of paper referred to, and my experience and observation prompt me to say most emphatically that, in my opinion, there is but one operation or treatment we can rely on for the radical cure of varicocele, and that is, *excision of the scrotum*, so as to secure reliable support for the testicles and their appendages.

A case that has been under my observation since 1872 will, I think, bear me out in my assertion. The gentleman—at that time a medical student, and now a practitioner in this city—was first operated upon by the Gagnele's method. Silver-wire ligatures were passed subcutaneously around the varicosed veins about one inch apart, and secured by twisting on metal buttons. They were allowed to remain in position six days. Ten days after their removal the varicocele was found to be worse than before the operation. Eighteen months later the young man again submitted to the same operation, this time having the veins divided with a tenotomy knife at a point midway between the subcutaneous ligatures. This operation seemed to have benefited the patient somewhat; still, in 1876 he found it necessary to again be operated upon. Under the advice of the late Dr. Paul Eve, of Nashville, Tenn., the young man was operated upon by the radical or excision method, about two and a half inches of scrotum being removed by Dr. Eve. The result was entire relief, which has continued up to the present time. The young physician practises his profession regularly, and experiences no inconvenience from his former varicocele at all. A careful examination reveals a slight enlargement of the veins, but the parts are so thoroughly supported by the contracted scrotum that no suspensory bandage or other support is necessary.

Since this case came under my observation I have

positively refused at all times to attempt to cure varicocele by any other method, and my success has been uniform. Until a short time ago I considered the operation, of course, a dangerous one, the hemorrhage being at times alarming. To overcome this difficulty I devised a clamp, which is shown (half-size) in the accompanying cut.

All the scrotal clamps heretofore invented have only served as *guides* to the surgeon, and their removal after cutting is always followed by profuse hemorrhage. With my clamp the operation is completed before its removal, and there is absolutely no hemorrhage. Another objection to other clamps has been the "roughened" or "serrated" inside surface, to prevent slipping, which produces more or less laceration or contusion of the parts. To prevent slipping, on the inside of blades of my clamp are longitudinal grooves which receive a fold of scrotum, thus preventing any slipping whatever, and no bruising of the parts is to be encountered. I find that the cut edges, when the neighboring tissues are not bruised, always heal by first intention. Ordinarily I employ a woven-silk ligature, and apply simple carbolic dressings; but recently I have had splendid success by the antiseptic method. When the latter is employed I use the juniperized animal ligature, wash parts with 1,000 bichloride mercury solution, dress wound with iodoform cotton and gauze, held in place by figure-of-eight bandage. This dressing I allow to remain in position eight days. On its removal the wound is found to have healed by first intention, and with little or no suppuration.

In offering my clamp to the profession I feel confident that its use will soon place excision of the scrotum as a radical cure for varicocele in the category of minor surgery.

Very respectfully,

FERDINAND KING, M.D.

P.S.—I also use my clamp in performing circumcision, and find it indispensable. I always use a thread long enough for two interrupted stitches, to be cut in the middle before tying, after removal of the clamp.

F. K.

ATLANTA, GA.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 31 to November 6, 1886.

CLEMENTS, B. A., Major and Surgeon. Died November 1, 1886, at Fort Leavenworth, Kan.

MIDDLETON, J. V. D., Major and Surgeon. Ordered from Department of the Missouri to David's Island, New York Harbor. S. O. 252, A. G. O., October 29, 1886.

WOODHULL, A. A., Major and Surgeon. Ordered from David's Island, New York Harbor, to Department of the Missouri. S. O. 252, A. G. O., October 29, 1886.

WILLIAMS, J. W., Major and Surgeon. Ordered from Department of Colorado to Department of the East. S. O. 252, A. G. O., October 29, 1886.

CORSON, J. K., Captain and Assistant Surgeon. Ordered from Jefferson Barracks, Mo., to Department of Colorado upon expiration of present leave of absence. S. O. 252, A. G. O., October 29, 1886.

TURRILL, H. S., Captain and Assistant Surgeon. Ordered from Department of the Platte to Department of Colorado. S. O. 252, A. G. O., October 29, 1886.

MUNDAY, BENJAMIN, First Lieutenant and Assistant Surgeon. Ordered from Department of Colorado to Jefferson Barracks, Mo. S. O. 252, A. G. O., October 29, 1886.

OWEN, WILLIAM O., JR., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, New York Harbor, and ordered for duty as Post Surgeon, Plattsburg Barracks, N. Y. S. O. 170, Division of the Atlantic, October 29, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Ordered from Fort McIntosh, Tex., to Post of San Antonio, Tex. S. O. 152, Department of Texas, October 27, 1886.

HARRIS, H. S. T., First Lieutenant and Assistant Surgeon. Ordered from Post of San Antonio, Tex., to Fort Clark, Tex. S. O. 152, Department of Texas, October 27, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 6, 1886.

NEILSON, J. L., Surgeon. Ordered to the Receiving Ship New Hampshire.

DRENNAN, M. C., Surgeon. Detached from the Receiving Ship New Hampshire and granted one year's leave.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 6, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	26	11
Scarlet fever	15	4
Cerebro-spinal meningitis	3	2
Measles	177	18
Diphtheria	83	32
Small-pox	0	0
Yellow fever	0	0

THE UBIQUITOUS BACILLUS.—The occurrence of pathogenic micro-organisms in the synovial fluid of inflamed joints, due to diseases of different kinds—as, for example, pneumonia, diphtheria, erysipelas, and glanders—having been amply demonstrated by Schüller, and no information existing in medical literature as to the examination of the synovia of patients suffering from infectious diseases without concomitant articular inflammation, Dr. Smirnoff, of Kazan, wished to discover whether in all cases of infectious disease pathogenic schizomycetes migrate into the joints, or whether this occurs only sometimes (*The Lancet*). He therefore made a series of observations on the bodies of patients who had died of various diseases, but had had no articular inflammation. As a rule the knee-joint was chosen for examination, though in cases of great emaciation from phthisis, where the fluid in the knee was too small in quantity for the purpose, the shoulder-joint was selected instead. It was first carefully inspected to ascertain that there were no signs of inflammation, as redness or swelling. The surface was then washed, together with the knife and the glass slides required, with a solution of sublimate. A lateral incision was then made, and some of the viscid synovia transferred to the slides and dried. They were then passed several times through a gas flame, and afterward the preparations were stained with fuchsin, gentian-violet, methyl-violet, etc., and examined microscopically, the observations being in all cases verified by Professor Lubimoff. In five out of nine cases of uncomplicated

croupous pneumonia, micro-organisms like Friedländer's diplococci with capsules were found. In two cases of pneumonia, complicated with purulent meningitis, staphylococci were distinctly recognized. Koch's bacilli were found in three out of eight cases of phthisis. In three cases of recurrent fever (*febris recurrens*), in two of miliary tuberculosis, and in two of Siberian plague, no micro-organisms could be detected. Cocci were seen in one case of erysipelas, one of malignant pustule, and in one of frostbitten toes, with septicæmia. Three more cases gave negative results, viz., one of burn, one of purulent meningitis, otitis, and caries of the petrous portion of the temporal bone, and one of pericarditis, peritonitis, pleurisy, caseous pneumonia, and perimetritis. The most frequently seen micro-organisms were spherical and ovoid cocci, small bacilli being found much less often, and spirillia and curved bacilli being never seen at all, apparently finding themselves unable to penetrate the joint.

THE GREAT QUESTION OF THE DAY.—The late Dr. Samuel D. Gross used the following words in an address delivered at the dedication of the McDowell monument: "Young men of America, listen to the voice of one who has grown old in his profession and who will probably never address you again, as he utters a parting word of advice. The great question of the day is not this operation or that, not ovariotomy or lithotomy, or hip-joint amputation, which have reflected so much glory upon American medicine—but preventive medicine, the hygiene of our persons, our dwellings, our streets—in a word, our surroundings, whatever or wherever they may be, whether in city, town, hamlet, or country; and the establishment of efficient town and State boards of health, through whose agency we shall be more able to prevent the origin and fatal effects of what are known as the zymotic or preventible diseases, which carry so much woe and sorrow into our families, and often sweep like hurricanes over the earth, destroying millions of human lives in an incredibly short time. The day has arrived when the people must be aroused to a deeper and more earnest sense of the people's welfare, and suitable measures adopted for the protection, as well as for the better development of their physical, moral, and intellectual powers. This is the great problem of the day; the question which you, as representatives of the rising generation of physicians, should urge, in season and out of season, upon the attention of your fellow-citizens, the question which above and beyond all others should engage your most serious thoughts and elicit your most earnest co-operation. When this great object shall be attained, when man shall be able to prevent disease, and to reach with little or no suffering his threescore years and ten, so graphically described by the Psalmist, then, and not till then, will the world be a paradise."

INTER-STATE NOTIFICATION IN INFECTIOUS AND CONTAGIOUS DISEASES.—In addition to the resolutions presented by the National Conference of State Boards of Health, and adopted by the American Public Health Association, the following from the Advisory Council of the Association were also adopted:

Whereas, It is necessary for the protection and preservation of the public health that prompt information should be published of the existence of cholera, yellow fever, and small-pox;

Resolved, That the American Public Health Association believes it to be the duty of each State and provincial board of health, within whose jurisdiction one of these diseases shall appear, to give, immediately, notice of the existence of the same to neighboring State and provincial boards of health, and to the boards of towns and cities in neighboring States and provinces which have no central board. In such States and provinces this duty of notification lies upon the local boards.

Resolved, That it is the sense of this Association that whenever rumors of the existence of pestilential disease in a State or province prevail, and upon application to the health authorities of said State or province information respecting the truth of the rumor is refused, the health officials of another State or province are justified in entering the before-mentioned State or province for the purpose of investigating and establishing the truth or falsity of such rumor. In conducting the investigation every reasonable effort should be made to co-operate with the health authorities of the locality.

Resolved, That a case which so nearly resembles one of the specified diseases as to raise a reasonable suspicion of its character, or a case in which concealment is attempted, ought to be reported as a suspected case, in the same manner as if the diagnosis were certain.

IRVING A. WATSON,
Secretary American Public Health Association.

PILLS AGAINST PHTHISIS.—Potain recommends a pill containing creosote, ♏ ½; iodoform, gr. $\frac{1}{10}$; ext. opii, gr. ¼; balsam of tolu and turpentine, each, ♏ ½. Of these from four to ten may be given daily.

TO THOROUGHLY DISINFECT THE INTESTINAL PASSAGES by internal medicine, give gr. iv. of naphthaline in powder form, with a little sugar, every hour. Coto bark is said to be a disinfectant also, as well as astringent.

TUBERCULOUS SPUTA, under conditions ordinarily favorable to decomposition, preserves virulence for from three to eight days, according to Dr. Thoma Pierre.

INTERMITTENT HÆMATURIA is very common in South Africa, and is caused by the parasite *Bilharzia hæmatobia*.

BAKERS AND BAD TEETH.—Dr. Hesse, of Leipsic, says that bakers suffer especially from dental caries. This is due, he thinks, to flour-dust, which gets into the teeth and produces an acid fermentation.

TO STOP HICCOUGH in an infant Dr. J. M. W. Kitchen, of this city, advises spraying the posterior wall of the pharynx by means of an atomizer, using only pure water.

THE EXTIRPATION OF THE UTERUS FOR CANCER.—Professor Carl Braun, of Vienna, believes that the total extirpation of the womb for cancerous disease is useless. For extirpation of the neck he prefers the galvano-cautery.

BJIIIIIII.—With this striking aggregation of consonants and vowels Dr. E. Manière indicates the noise of tinnitus auritus.

MR. WALTER M. GIBSON, formerly president of the board of health of the Sandwich Islands, has been recently raised to the dignity of minister of foreign affairs and premier of the kingdom by His Majesty King Kalakaua.

THE DANGERS OF IRON.—Dr. J. Strahan utters a caution against the long-continued use of iron, maintaining that there is a danger of intestinal concretions being formed in such cases.

THE UNIVERSITY OF DORPAT.—Upon the first of September of the present year, there were 1,734 students in the University of Dorpat, Russia, of which number 748 were medical students. Most of these were from the Baltic provinces of Russia, a few from Poland, and only 25 from foreign countries. The university is under evangelical control, and the language spoken is German, though all students are obliged to pass an examination to show their proficiency in Russian before admittance.

A JOURNALISTIC CHANGE.—In this country, medical journals, in the natural course of growth, develop from the monthly into the weekly. If this is to be regarded as a sign of prosperity, we must conclude that journalism in Russia is not a success; for the *Zemskaya Meditsina* ("Provincial Medicine") announces that it will in the future appear as a monthly instead of a weekly, as heretofore.

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Original Articles.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.[1]

BY CLEMENT CLEVELAND, A.M., M.D.,

NEW YORK

AT the risk of being tedious I have ventured to offer to the Society a few considerations upon this much discussed subject.

I shall be as brief as possible upon theoretical points, and confine myself almost entirely to practical conclusions.

In reading much that has been written upon the treatment of typhoid I have been struck by the unanimity with which the large bulk of writers advocate the use of quinine, some regarding it as a specific in large doses, and others declaring that it has no positive effect either in shortening or even in modifying the disease, yet most of them considering it an important factor in the treatment.

Liebermeister says: "My own experience, at least after treating more than fifteen hundred cases with quinine in doses that would have formerly been considered as dangerous to life, gives no results that would indicate any specific influence of the drug over typhoid fever, nor any power to cut the fever short at any stage."

Farther on he says: "Quinine has often been recommended as a specific in this disease, but has soon been found ineffective and again been dropped. . . . I myself have used it as an antipyretic since 1858, but I never dared to use as large doses as are necessary for a powerful antipyretic effect until after the communications of Vogt. Since then I have hardly treated a severe case of the fever without quinine." He is in the habit of giving from twenty-two to forty-five grains at one dose and then not repeating it for twenty-four or forty-eight hours.

Niemeyer says, after speaking of the hydro-therapeutic means for reducing temperature: "For moderating the fever in exanthematic, as well as in abdominal typhus, next to the abstraction of heat the administration of quinine deserves most confidence."

Da Costa has abandoned the use of quinine as a specific, though he uses the drug in most of his cases of typhoid.

Loomis does not believe in the efficacy of large doses of quinine in arresting the development of typhoid, but uses it in thirty or forty-grain doses as an antipyretic.

Flint says: "Of drugs which have an antipyretic effect quinine holds the first rank. It should be given in full doses, twenty to forty grains, before the evening exacerbation. Trials should be made of this drug, inasmuch as, if tolerated by the stomach, it is only objectionable on the score of annoyance from cinchonism."

Reynolds says: "In the absence of cerebral or gastric disturbance quinia is a most valuable remedy for subduing the evening exacerbations."

The above quotations will serve to exemplify the position taken by the majority of writers of the present day who use quinine in typhoid but deny its specific action. Others, like Stille, maintain that the drug is unnecessary, useless, and often dangerous. I have read quite a number of papers, most of them well written, upon the effect of quinine in typhoid, by men in different parts of the world, many of whom speak with the most positive conviction of the results they have obtained. I have talked with many physicians upon the subject, the most of whom, I found, use quinine in typhoid—some, to be sure, as a matter of routine, but most with an intelligent reason for so doing. I found, too, that many of them believed they had aborted cases with the drug. Say what we may the profession, as a whole, has an abiding faith in this medicine in this disease.

It is a noticeable fact that most of those who do not believe in the abortive effect have drawn their experiences largely from hospital practice, while those who advocate its use as a specific are, in the main, writers who base their belief upon the results of private practice alone. It is well known that, in most hospital cases, the patients have not entered till the disease is well advanced, rarely before the end of the first week, and often not till later, and before entering have been under no systematic treatment. It is different in private practice, where the physician usually sees his patient early, and, though it is hardly possible to make a positive diagnosis before the fifth or sixth day, yet he has his suspicions aroused and is able to begin active measures before the typhoid process has made much headway. It is just here that those who believe in the specific action make their strong point, that, to obtain the positive curative effect, it should be given early and in doses sufficiently large to keep the temperature below the danger point. It cannot, of course, be claimed that the statistics of cases reported as aborted are reliable, for they never can be, unless an easy practical way of detecting the typhoid bacillus can be discovered which will enable us to diagnosticate the disease early in its course. What I would urge is this, that, though not susceptible of proof, the conviction that quinine has this abortive power remains firmly fixed in the minds of many, and, moreover, that it is hardly reasonable to suppose that the large number of men who are known to hold this view could be entirely wrong and that there is no basis whatever for their claim.

But may there not be a scientific basis for this belief? The parasitic theory of typhoid is generally admitted; the typhoid bacillus has been found in the blood and the urine of typhoid patients.

Binz says: "In healthy persons and most febrile patients it (quinine) is not decomposed in passing through the blood, but is entirely excreted by the kidneys and bowels. It is only in typhoid that a deficit of twenty-four per cent. has as yet been obtained." About seventy per cent. is excreted by the kidneys alone in from three to twenty-four hours. Quinine has the power of destroying low organic and vegetable life. As it has such a destructive effect upon germ-life outside of the human body, it is probable it has the same effect when taken into the system, especially as so large a percentage of it is passed unchanged in the secretions, and must therefore retain its germicide power in passing through the blood.

As quinine is a specific in intermittent fever, and is so by virtue of its power to overcome the vegetable poison that produces it, and we know that it has this power over the organic as well as the vegetable germ, it therefore should have the same effect in some degree in typhoid. And this position is strengthened by the following quotation from Binz, who says: "Those infective poisons which are capable of self-multiplication, after a more or

[1] Read at a meeting of the Practitioners' Society of New York, November 6, 1886.

less regular period of incubation, are either rendered by quinine incapable of further development, as in malaria, or have their energy paralyzed, as happens to some extent in typhoid." Now it amounts to the same thing whether these germs are destroyed outright, rendered incapable of further development, or have their energy paralyzed, if this paralysis of energy can be kept up long enough for nature to eliminate them, as she makes a brave struggle to do, and suceeeds in doing in those cases that recover.

My own position is this: I believe in the power of quinine to abort some cases of typhoid, to shorten the duration of others, and to ameliorate the symptoms of most. I have seen the effect too often to have any lingering doubt about it. I believe, too, that the time is coming when this will be universally acknowledged. This will be when the detection of the typhoid bacillus enables us to attack the cause of trouble early in its progress.

To be successful the drug must be used boldly. In giving large doses we are of course in danger of overstepping the therapeutic effect and obtaining the toxic. But we are in the same danger with opium. We know perfectly the signs and symptoms of the toxic effect of that drug. We ought to know as well those of quinine. Like opium, quinine is capable of producing death, but enormous doses are necessary. As with opium, we should know by the symptoms how far to push it. Experience has taught that one hundred and eighty grains, given in one dose, *may* produce death. Five ounces, two thousand four hundred and sixty grains, taken in a period of ten days, *has* caused death. That would allow an average of four hundred and sixty grains for the twenty-four hours. But there is no one who, in his wildest dreams, would think of giving one hundred and eighty grains at a dose or a daily dosage of four hundred and sixty.

In regard to the tolerance of the drug, I believe there are very few people who cannot take it in the early days of the fever. In the first ten days, before the mucous membrane has undergone changes due to the typhoid process and the functions of liver and kidneys have been disturbed thereby, there are comparatively few who do not bear the drug well.

It is important to begin with quinine early and not to wait to be absolutely sure of diagnosis. My own plan is to begin with a large test-dose, of five to ten grains, given every fifteen minutes for two hours, as the nature of the case presents itself to my mind. This dose is given in the latter part of the afternoon. The temperature is taken every two hours. If by morning there has been a decided lowering of the temperature I feel encouraged to believe that it is a case manageable by quinine, and particularly so if it is accompanied by profuse sweating.

As quinine is eliminated so rapidly and in such large quantities, I believe it better to give it continuously, in order to keep the system constantly under its influence. Following out this theory, instead of giving it once a day in a large dose, I then give five or ten grains every two or three hours. If by seventy-two hours no decided effect is produced upon the temperature I discontinue the use of quinine entirely, or give it merely in tonic doses. If by seventy-two hours it has not reduced the temperature, I believe it never will.

I have not found it necessary, in the cases where I have used quinine, to give more than eighty grains in the twenty-four hours, and rarely more than sixty, while forty grains is all that has been required in some. It is important to bear in mind that giving a large amount, sixty grains for instance, distributed in five-grain doses throughout the course of twenty-four hours, is not the same as giving that amount at one dose. By the time the last five grains are given, fully three-fourths of the whole have passed out of the body in the secretions.

In all cases I use sponging, not for the antipyretic effect, but for the sake of keeping the skin clean and active.

In a case during the past year, in a young lady of eighteen, I gave five grains of quinine every two hours, now and then stopping it for a shorter or a longer period to note the effect upon the temperature. As long as the quinine was given every two hours the temperature would remain nearly normal, but just as soon as I *let up* on the *quinine*, up would run the temperature. On the tenth day, being a little uneasy from the apparent effect upon the heart, the patient having taken an average of sixty grains a day for nine days, I stopped the quinine. In the *afternoon* the temperature went above one hundred and three degrees, and also on the next day. For these two days I used antipyrin to reduce the temperature. On the twelfth day I returned to quinine in the same doses, not being satisfied with the antipyrin and because I had more faith in the quinine. The temperature went down at once, and did not run up again after the fifteenth day, when I began to lengthen the intervals between the doses an hour or more each day. The disease was then practically at an end, but I continued to use the quinine for two weeks longer in small doses. This case serves to illustrate the experience I have had with a number of others.

Again, I had been treating for ten days a case of typhoid with aromatic sulphuric acid and other remedies, *pro re nata*, where nearly every symptom of the disease was present, when, as matters were going from bad to worse, I decided to give quinine, and gave five-grain doses every two hours with the happiest results. The whole condition changed for the better within twenty-four hours. Every symptom was ameliorated. The diarrhœa, which was constant and characteristic, began to decrease at once. The patient looked better and felt better. Within a week she was convalescent. This case is not unique in my experience. I mention these two cases because they were severe and unquestionably typhoid; and the latter I speak of particularly, to emphasize the point that quinine will sometimes shorten the duration of typhoid, even after the tenth day.

I can recall a number of cases in families where tpphoid existed and subjected to the same influences, where, but for the timely administration of quinine, I believe positive typhoid symptoms would have developed. I believe it is in this stage, the stage of so-called incubation, when the typhoid germs are said to be in an inactive state, that the drug will yet be found to accomplish its greatest work in the way of prophylaxis.

One other point I have observed is, that typhoid patients in whom quinine acts well not only recover more rapidly, but are more likely to recover permanently, or have less of the disagreeable after-effects of the disease. Statistics, if they show anything, show that the expectant plan of treatment gives a much higher death-rate than where quinine forms an important element in the treatment.

In this short paper I have attempted to express what seems to be, from all I am able to learn, the feeling of many in the profession regarding the use of quinine in typhoid fever, and to give some of the apparent reasons why, it appears to me, it holds and must continue to hold, an important place in the therapeutics of that disease.

A SUBSTITUTE FOR CIRCUMCISION.—Mr. Herbert Snow, writing in *The Lancet*, suggests that circumcision may often be avoided by the introduction of a pair of dressing forceps under the prepuce and stretching the skin by separating the blades. This can be accomplished without pain by means of an application of cocaine. After the tissues have been thoroughly stretched, the foreskin should be drawn back every morning for a few days.

A CASE OF EPITHELIOMA OF THE AURICLE.

By THOMAS R. POOLEY, M.D.,
NEW YORK.

The very rare occurrence of epithelioma of the auricle alone makes the report of an additional case warrantable. But in addition to this reason for reporting it is the fact that the growth has not reappeared, although it is now nearly two years since its removal. I shall not take the trouble to compile the number of cases hitherto published, for anyone at all familiar with ear diseases can bear out the above assertion as to the rarity of epithelioma in this location. As the early history of the development of such growths is always interesting and suggestive I asked the patient, who is a very intelligent man, to write me an account of it up to the time I saw him, which I here give: "I first noticed the sore on my ear five years ago, at which time I supposed it was a frost-bite. In its primary condition thin scales would appear, breaking off quite readily, leaving the surface smooth; and, with the exception of an occasional itching, the annoyance was slight. At the expiration of a year the sore was painful in cold weather, which confirmed my first idea that it originated from a frost-bite. During the second year the scales grew thicker and broke off at longer intervals, leaving the surface smooth, but with slight pain remaining. About the third year the scales were sore to the touch, but with a few applications of vaseline the somewhat heavy scale or small lump would break off, giving relief for a short time, when the whole operation would have to be renewed. About the beginning of the fourth year the warty tumor, as it seemed, would, after a few applications of a strong acid which my physician prescribed, become itchy at times, and the scales first whiten and then gradually assume a hard, bony and yellow appearance, very painful to the touch, not otherwise, and difficult to break off without the assistance of vaseline.

"The beginning of the fifth (last) year impressed me as in the previous ones that, regardless of attempts to check or cure the sore, it was gradually getting worse. I noticed that, even when the scab came off, the pain and soreness remained, and very soon thereafter the surface would assume a puffy appearance.

"During last summer I suffered with pain with slight intermissions, a sharp and penetrating pain at times, followed by long periods of heavy pain. I fully realized that the acid was powerless to effect a cure and that I must seek relief through some other agency.

"Toward the close of the summer (1884) the scab became more bony-like, very difficult and painful to remove, and the inflammation intense. Soon as my physician returned from the country I called on him for further advice. He recommended an operation as soon as possible, and the first one occurred at my house, October 25, 1884. Two incisions were made; the under surface of the largest and main scab presented an appearance similar to a piece of honey-comb, the cells in close connection and filled with clear, yellow matter. The piece was preserved by the surgeon for microscopic examination and I was afterward informed that such an examination had been made, and from its appearance the sore or trouble pronounced *non-malignant.*

"The healing of the wound progressed, as I supposed, fairly well, but two cone-like pieces of flesh, white, hard, and painful appearing, I had them cut off on November 20th. Subsequent to this operation the conditions were more unfavorable; the scab grew rapidly and assumed its old aggravating look, but, strange to say, was painless for a time. When the pain returned it was not in the ear at all, but in the large gland of the neck nearest the ear. I acquainted my physician of this new symptom, and I said that another surgeon must be given the case to attend to thereafter."

My relation with the case now began. The patient was brought to me on December 15, 1884 and the same day I made the operation—which I shall describe after giving the appearance and extent of the growth as it then appeared. The patient, T. L. H——, aged forty-two years, was a pale, thin man, and his face gave the impression of long-continued anxiety and suffering. He gave the following family history: His mother died in 1867 of cancer of the breast in her sixty-seventh year. Five years ago a brother, aged forty-six had an epithelial cancer of the nose removed which has not since returned.

Status præsens.—Situated upon the antihelix there is a surface which is covered by an incrusted, scaly scab, which was readily removed, when the underlying surface showed throughout a superficial loss of substance and in its centre a rather deep ragged-edged ulcer. The growth proper measured ½ by ⅜ of an inch. The outer margin, toward the helix, showed a small nodular eminence about the size of a small pea. Moreover, there were a few small nodules below the well-defined border of the growth, toward the lobule. There was considerable enlargement of the submaxillary glands. Before proceeding with the operation the whole area of the growth was included between the blades of a Knapp's entropion forceps, and after the clamp was tightened an injection of a few drops of a four per cent. solution of cocaine was made in the upper margin of the growth with a hypodermic syringe. In five minutes thereafter the operation was proceeded with.

The entire growth was included in an elliptical incision, care being taken to keep well within the healthy skin; this was dissected cleanly off down to the cartilage. The piece thus removed showed on its posterior surface a discolored superficially ulcerated spot, and the cartilage was found to be somewhat softened. Accordingly, all of this suspicious-looking part was scraped off with a sharp spoon, which in some places went through to the underlying integument. The wound was then partly drawn together with sutures covered by absorbent cotton and a firm compressive bandage applied. The operation lasted from ten to fifteen minutes, was almost bloodless, and declared by the patient to be painless until the sutures were introduced. After its completion the patient was allowed to return to his home in the country, about an hour's distance from New York. The subsequent course of the case can be told in but a few words. Immediately following the operation there was some little reaction, with considerable swelling of the ear, which, however, rapidly subsided. The wound healed kindly, but rather slowly, and was from time to time stimulated by the occasional application of nitrate of silver and kept dressed with an ointment of the red oxide of mercury. Early in February, when I presented the patient to the New York Ophthalmological Society, the wound had completely cicatrized, but there was still some vascularity about the scar, and several of the members expressed the opinion that the growth might soon return. Such, however, has not been the case. I have seen the patient repeatedly, and there is not the slightest evidence of any return. The scar is smooth and painless. It will be two years the fifteenth of next December since the operation, and from present appearances we may hope the extirpation of the growth will prove a radical cure. The growth was examined by Dr. Thomas E. Satterthwaite, December 18, and proved to be an epithelial cancer, and contained the characteristic epithelial nests. He adds a recurrence may therefore be expected, although in this locality epithelial cancers are not of the most malignant type. The situation of the growth was such that it was very accessible, and therefore favored its thorough removal, and in this I was very cautious, extending my incisions well into the healthy skin and carefully scraping out all the softened and diseased cartilage. The use of the entropion forceps, which here found a new application, was of great service in rendering the field of operation bloodless. It was noticed, too, and mentioned by me in speaking of the case to the New York Ophthalmological Society, that the anæsthetic effects of the cocaine were apparently much enhanced by the constriction on

the part exerted by the use of the clamp. I mention this now as of interest from the application and extension of this very method to the more complete production of anæsthesia which has been introduced by Dr. Leonard Corning, of this city, without, however, desiring to claim any priority, for Dr. Corning is justly entitled to any and all the credit which this application of cocaine may attain in surgical practice.

RECENT MEDICAL CASES IN THE COURTS.

By HENRY A. RILEY, Esq.,

NEW YORK.

Life insurance is an important branch of medico-legal study, and the cases on the subject are increasing in number and importance. The most important case, however, which has ever come before an American court is that of Colonel Walton Dwight, of Binghamton, N. Y., who died in 1883. The case attracted great attention at the time, and interest is now renewed by a recent decision of the Court of Appeals reversing the former judgment and ordering a new trial. The case was extraordinary in many of its features, and a full statement cannot now be given of all the circumstances. Colonel Dwight was a large, healthy man, about forty-one years of age, and in 1883 he obtained insurance on his life to the amount of about two hundred and fifty thousand dollars. Every life insurance company in the United States was applied to for insurance, and the application was in almost every case accepted. The Equitable Life Assurance Society issued a policy for $25,000, but the others were for smaller sums. Colonel Dwight at the time of taking the policies was a bankrupt, and had no means of paying the premiums, amounting to about ten thousand dollars a year. It appeared, in fact, later on, that he had borrowed money to pay the first quarter's premiums and was absolutely without means to pay the succeeding premiums. It would seem that Colonel Dwight anticipated trouble in collecting from the insurance companies, for he made his will as if for the purpose of making the people of Binghamton friendly to him. He made bequests to most of the public institutions of Binghamton, and also to all the principal lawyers of the town. Colonel Dwight died on the night before the second premium in the policies became due, after a short, and not apparently dangerous, illness. There was instantly great excitement among the insurance companies, and a large number of them refused to pay the policies, alleging suicide. The Equitable Company paid its policy of $50,000, but the others defended suits brought on their policies. The inquest was to the effect that the deceased died from natural causes. The civil courts decided in the same way, in the case of the contesting companies, and a verdict was rendered against them. This decision has now been reversed and a new trial ordered. It is considered doubtful, however, if another trial is ever had, because the witnesses are scattered and the cost of the trial is very large. There were several theories about the death, and that of the relatives was, of course, that it was from natural causes. This was substantiated by the coroner and on the civil trial, but now a new trial has been ordered and the question is again at issue. There are some difficulties about the theory of suicide adopted by the insurance companies.

Several persons were with Colonel Dwight until very shortly before his death, when no apprehensions were felt as to a sudden departure. One person was sitting at the entrance of the room, but just outside, at the moment of death, and reached the bedside just as he died. This occurred about 11 o'clock (P. M.). He testifie sthat there was nothing unusual transpiring in the sick-room to his knowledge. The undertaker says that a few hours after death there was no crease or indentation in the neck, which appearing afterward at the autopsy was relied on to substantiate the theory of death by strangulation. The undertaker testified further that he bent the neck of the deceased in the ice-box, and that this caused the indented appearance.

Large quantities of morphine had been given to the patient by the physicians in order to quiet him, and he was said to be little affected by ordinary doses. The theory of the relatives was that this morphine caused the heart to cease its action, and death resulted. The autopsy was claimed, however, to show that the heart was in a healthy and normal condition. The medical testimony as to the causes of death was not very clear, and the experts differed so widely in their opinions that it was difficult to form a clear idea of the merits of the case. The fact that a bankrupt took out insurance to the amount of $250,000, and died shortly before the second quarter's premium became due is certainly a curious circumstance; but the testimony as to strangulation seems to be deficient in the opportunity furnished for bringing about such a result, and the medical testimony is conflicting. Some of the experts who favored the theory of suicide were of the very best reputation, and one of the many hypothetical questions introduced will be of interest as stating the medical testimony: "Suppose that a man, after an obscure alleged illness of about five weeks' duration, is, on a given day, able to be up and transact business with his lawyer, and have his beard trimmed; is left by his doctor at 10 P. M. on the same day in such a condition as not to give any cause for alarm, and that at 11 P. M. he is talking pleasantly to his attendant and eating a cracker, and in less than half an hour is dead, and that at the autopsy, made fifty-eight hours after death, the following conditions are revealed: A heavy indentation extending upward and backward from os hy oides to right around back of neck, and on left side below the thyroid cartilage, running upward and backward at an angle of about forty-five degrees. Post-mortem discloration of posterior portion of the body; several small ecchymoses of skin of back and shoulders; anterior part of right arm, small ecchymoses; thorax, lungs, and heart in natural positions, except that the lungs are unduly inflated. About four ounces of serum in bottom of left pleural cavity. Left lung, one pound and three-quarters; bronchi, congested and coated with mucus; upper lobe congested and œdematous; lower lobe still more congested and œdematous. Right lung, two pounds; bronchi, congested and coated with mucus; upper lobe, at the apex several small fibrous nodules; rest of upper lobe congested and œdematous; lower lobe congested and œdematous. Heart healthy; weight fifty ounces; right ventricle contains a little fluid blood, not over half an ounce; left auricle contains a little clotted blood. Stomach, at the fundus, mucous membrane softened and partly destroyed by post-mortem changes; pyloric end of stomach, mucous membrane studded with small white spots, denoting chronic gastritis. Liver, congested more than usual, normal color and consistence. Kidneys uniformly congested, and otherwise healthy. Epiglottis, larynx, and trachea congested and coated with mucus. Inner surface of the dura mater, on the left side, chronic hemorrhagic pachymeningitis, with a small extravasation of blood on the left side over the posterior portion of the parietal and anterior portion of occipital lobes. Pia mater of convexity normal, except discoloration over occipital lobes from blood. Brain neither congested nor anæmic, otherwise healthy. And, further, that at an inquest held five months after the first autopsy the indentation on the neck was still distinctly visible; could or could not death have been produced by natural causes?" The answer to this question, by five well-known experts, was that death could not have occurred from natural causes. Notwithstanding this strong testimony on the part of the experts for the defence, judgment was rendered for the plaintiff, and this decision is the one which has just been reversed by the Court of Appeals.

The daily papers give a curious instance of crime re-

sulting from nervous weakness. The case is that of Frederick Berkhardt, a boy of weak intellect living in Newark, N. J. He was charged in the police courts with an assault upon his father. The mother of the boy testified that Frederick was inordinately fond of tea and coffee, and that his nervous system was shattered. A physician said that the boy was suffering from a disease caused by excessive use of coffee. The assault occurred at the table when the boy attempted to take away his father's coffee, saying he must have coffee or die. The boy was found guilty, but sentence was suspended.

A new industry has been opened up to those people who live by their wits by the passage of a law by the New York Legislature at its last session. This law provides that no person shall purchase, or have in possession, or expose for sale any song or wild bird other than a game bird, or any part thereof after the same has been killed. The punishment for a violation of this law is imprisonment in the county jail or penitentiary for not less than five and not more than thirty days, or a fine of not less than ten or more than fifty dollars, or both, at the discretion of the court. One-half of the recovery shall go to the plaintiff, but as the informer is not likely to care for half of the imprisonment allowed by the statute, it is probable that a fine will always be imposed.

A fine field for the unemployed is here offered. The windows of the milliners are full of birds, "or a part thereof," exposed for sale on hats and bonnets, and the majority of the ladies who throng the streets of New York "have in possession" similar birds or "parts thereof." It does not seem difficult, therefore, for a smart man to secure a handsome income simply by taking memoranda of what he sees on a Broadway stroll, and then bringing suits for the penalty imposed by the statute. It is noticeable, however, that since attention has been called to the remarkable destruction of our best song and wild birds for the purpose of head decoration, that the use of this style of ornamentation has fallen off.

The Philadelphia County Medical Society has for a considerable time past been diligently at work ridding that city of illegal practitioners, and with the aid of the District Attorney has accomplished a great deal in depriving the quacks of their business. Some time since one of the journals of Philadelphia gave this statement about one of the fraternity: "Recently we heard of a man in this city who was suffering from hernia. He read the advertisement of one of these frauds, who promised a cure. He called upon him and was assured that he could be absolutely cured in four months; in fact, he was given a written guarantee of cure, prepared on a printed blank, thus evidencing the habit of this wonderful leech to give guarantees. He was to pay eight dollars a month. To make a long story short, he visited his would-be executioner for three months and paid him twenty-four dollars. About this time his hernia became strangulated, and he sought the services of a regular physician just in time to save his life. Upon recovery he called and demanded the return of his money as the guaranteed cure had not been accomplished.

The reply was characteristic: "Not one cent will you get from me; all I want is your money; the world is full of just such fools as you." The prosecutions seem to have been so numerous and so successful that one of the medical journals recently advised the profession to be very careful about future prosecutions, lest the cry of persecution should go up and the irregulars should become martyrs and prosper pecuniarily at the expense of a public which likes to be cheated.

A Pittsburg court has recently had before it the case of a colored physician, who, in addition to his strictly medical practice, claimed to exercise the power of reviving waning affections between man and wife. The method of treatment was to have the husband place a piece of his wife's clothing in a bottle and bury it, and then the wife would obey his slightest wish. In the case before the court, the wife acknowledged the power of the buried bottle, and said that she was obliged to crawl along the floor of her house against her will. It was not stated whether the husband stood over her with a club and assisted in the crawling operation. She further stated that when the bewitched bottle was brought to her and broken, her instant recovery followed.

REPORT AND REMARKS ON A SERIES OF TWO HUNDRED CATARACT EXTRACTIONS.

By C. A. BUCKLIN, A.M., M.D.,

NEW YORK.

The first hundred of this series were cases which came under my personal observation while following the teachings of Hutchinson, Bowman, Cooper, Bader, and Liebreich, of London; Mooren, of Düsseldorf; Rothmund, of Munich; and Arlt, Stellwag, Jaeger, and Mauthner, of Vienna. The second hundred I operated upon myself. I think the accidents which occurred in the first hundred cases were quite as instructive to me as my own subsequent experience in operating.

It is not my object to criticise any one or any method, the whole end aimed at being to demonstrate how accidents happen in cataract extractions, and how to avoid such accidents.

Hutchinson, Bowman, and Cooper were not innovators in 1877, neither did they use antiseptic precautions, although using instruments which were absolutely clean. Their patients were all profoundly etherized. The section was never the extreme cut of Graefe; these operators having been taught by experience that a section so near the ciliary body exposes the patient to much greater danger from cystitic troubles without giving a corresponding degree of protection from corneal sloughs.

These gentlemen operated much earlier than their continental colleagues; the cataract frequently had a clear cortical layer; the capsulotomy was ⊥-shaped, and the iridectomy was usually rather small. I never saw but one accident at the time of the operation, and my observations embraced fifty cataract extractions. In one case, operated upon by Cooper, the lens turned a complete somersault before presenting in the wound, which accident I believe always to be the result of slight luxation of the lens with the cystotome. This operation was followed by acute iritis and closure of the pupil, good vision being, however, subsequently obtained by iridotomy. In other cases the corners of the iris were frequently caught in the wound, owing to the narrowness of the iridectomy. This fact, taken in connection with the free laceration of the anterior capsule of an unripe cataract, caused iritic processes to be an almost constant complication following the operation; the iritis was, however, mild, and did not in any instance prevent practical vision from being obtained.

I do not think Liebreich's method received the amount of attention that any new operation of apparent practical utility should receive. Neither do I think that his methods would have received the support of many unbiassed operators had they received proper consideration and a fair trial. Some of the results I saw from his operations were truly beautiful; but one, however, resulted in a complete slough of the cornea, and in another the iris became extensively attached to the corneal wound, and a slow grade of irido-choroiditis destroyed the eye.

Liebreich has had very many flattering successes, but, on the other hand, he never could tell when he would have the most discouraging failure, from no other cause than the peculiarity of his operation. His case of corneal sloughing, above mentioned, fell later into Bader's hands, and he did what I never saw intentionally done before. Although the patient was seventy years of age, he made repeated discissions of the lens in the remaining eye, and after several months caused it to absorb sufficiently to give the man practical vision, a slight portion

of the nucleus remaining, however, in the centre of the pupil.

The above experiment thoroughly demonstrated to me that it was practical to operate upon cataracts long before they were ripe.

The result of my experience I will give later, in detailing my own operations. Modern ophthalmologists dismiss in a very short manner the inquiries of our antiquated colleagues regarding the success of couching the lens, by declaring that the depressed lens is a foreign body in the eye, which will sooner or later be fatal to vision. They reply by stating that they have seen good and permanent results from couching, which statement I doubted for a long time.

In a conversation with the late Dr. Frank Hamilton, he said, when the results of couching at the time of the operation were satisfactory to him, they were usually, after a time, unsatisfactory to the patient; however, when he sometimes completely failed in displacing the cataract from the pupil, the results at a later period became permanently satisfactory to the patient. In the first instance he displaced the lens into the chamber of the vitreous, where it became a foreign body; in the second, his couching needle crushed through the lens, making an extensive discission. The lens, as in Bader's case, was gradually absorbed by the aqueous coming extensively in contact with its substance; in this way he certainly did obtain satisfactory and permanent visual improvement. Dr. Agnew, of this city, believes that the methods of Liebreich, owing to the prejudice of the profession against the man, never have received a fair trial, and he is giving them a trial.

An operation which commands the respect of an authority so bright and honest as Agnew must still be regarded with hopeful consideration. I think the fact that he has not discarded the operation is the most charitable thing I can say about it.

While London surgeons had few accidents during their cataract extractions, owing to their patients being profoundly under ether, the iritic complications were more numerous and severer than those observed after the operations by Horner, Mooren, or Arlt.

The difference in the severity and number of complications could not be traced to any other causes than the stage of development of the cataract at the time of operation and the extreme delicacy with which they operated.

The accidents during the operations were more numerous among the Germans, owing to the fact that they operated without ether, or without profound etherization. Every *accident* I ever saw among the German operators could be charged to one of these causes, the latter being much worse than the former.

Cocaine is excellent for all operations except enucleation, iridectomy, and cataract; I am fully convinced of its dangers in the two latter operations.

Many surgeons, however, have to lose an eye of one of their best patients before they can be convinced of the dangers of trusting it.

The German operators learned from experience that the débris left behind from attempting to remove a lens which had a clear cortical layer caused severe iritic reactions. They insisted in removing the iris sufficiently to prevent its corners from becoming entangled in the wound. They tore more frequently than cut the anterior capsule. I think an operator in 1877, who would have had the temerity to remove a lens from the eye, through which fingers could still be counted at four feet, would have found poor support from his colleagues had he been prosecuted for damages. Arlt, of Vienna, would wait for years till the layers of transparent cortex had become opaque. This was at that time the only way of avoiding the injurious effects from débris being left in the eye, thus causing iritic and irido-cystitic complications, and it cannot be denied that this was very sound practice.

The general introduction of peripheral capsulotomy, for all cases of cataract extractions, by Dr. Knapp, certainly obviates, to a large extent, the objections to having a small amount of cortex remaining.

The experience of Bader demonstrated to me the amount of lens material which would be absorbed in the eye of an elderly individual. Opening the capsule in such a way as to make a perfect pocket of the empty capsule, and thus allowing the débris from the lens to remain in a closed sac, suggested to me the possibility of operating early.

I have been continually experimenting, and now find no trouble in removing cataracts through which fingers can still be counted distinctly at four feet, and I am able to obtain a perfectly clear pupil without iritic complications.

Dr. Noyes, in his most excellent text-book on diseases of the eye, p. 263, states what has always been impressed upon me by most of the authorities, namely: "It may be premised that qualitative perception of light, that is, ability to see objects or to count fingers—not his own but of another—precludes the idea of operating." I know Dr. Noyes well enough to be sure that he states only what his experience has taught him.

My experience is, that out of one hundred cataract extractions ninety-six could count my fingers at from two to four feet. Two persons having cataract, who could not count fingers at any distance, lost their eyes from complications following cataract extraction. These failures were caused by accidents resulting from a hypermature condition of the cataract. I have carefully sought for the reason why experience thus far has brought me to a different conclusion than that arrived at by Dr. Noyes, whose experience certainly has been extensive. Under "Cystotomy," p. 246, I think I find an explanation of how our experience differs. He passes a cystotome below the lower pupillary margin, making a clean vertical cut in the anterior capsule. Now, I have made a horizontal peripheral cystotomy, corresponding, as nearly as practicable, to the upper margin of the lens; occasionally, owing to an extra large lens, or a failure on my part to make the opening in the capsule large enough, the capsule has torn in such a direction as to make an opening which was vertical, and extended below the pupillary margin. In every such case iritis followed, and what should be the movable margin of the iris became fastened to the capsule at the point of this vertical rupture.

I certainly should expect mild iritis in all cases where the opening in the capsule is covered by the free margin of the iris, and additional iritis in proportion to the amount of clear cortex existing at the time of the operation. I believe that every thoughtful ophthalmologist will agree that it is impossible, in an eye which has been opened, to make an opening in any portion of the lens capsule, which is covered by the iris, without having adhesions from between it and the lacerated capsule.

The capsulotomy done by Dr. Noyes is ingenious, easily done, and much less likely to be complicated by accidents in hands which are not thoroughly experienced and under perfect control than the peripheral capsulotomy. Dr. Knapp's cystotome, providing it can be maintained in perfect condition, so that there is no point which will not cut clean, is a very excellent instrument. It is, however, so delicate, that the difficulties in keeping it in condition are very great. The chances are that three out of five of the most experienced operators who have not used it before, or are not warned of the tendency one has to overreach, will plunge the point of the instrument through the suspensory ligament, which accident will be followed by vitreous presenting in the wound.

A sickle-shaped cystotome, with a point flat enough to be easily seen in the eye, is more easily kept in order, and is a much safer instrument in most hands than the Knapp cystotome.

The hundred cases which I have operated upon have taught me one lesson. With an empty stomach, profound etherization, absolute cleanliness, an iridectomy sufficiently broad to prevent any possibility of the corners of the iris becoming fast in the wound, and a clean peripheral cut in the capsule, the operation will not be complicated by any accident which is within the control of an operator. The eye will close in four days, without sufficient reaction for the patient to know from his sensations that the cataract has been removed; extensive hemorrhage into the vitreous at the time of the operation, or soon after, from the rupture of a diseased blood-vessel, is an unavoidable accident.

From the two hundred cases of cataract extraction I have seen, not an eye was lost by infection, and but one cornea sloughed, which accident was the result of a Liebreich section. If this number of cases had been treated antiseptically and the same favorable results obtained, it would have been considered as very positive evidence in favor of the antiseptic method of treatment. I believe that antiseptic precautions should be taken advantage of in our attempts to avoid infection, and intend to make use of them in the future, although I must acknowledge that my past experience would seem to show that the only *bug poison* necessary is absolute cleanliness. Ninety-four of my cases are of no interest to operators, except as to the condition of the eye previous to operation, for without incident worthy of mention I obtained a clear pupil for the passage of light to the retina. Ninety-two of these cases could see a lighted candle at twenty to forty feet in a dark room, and could still count my fingers at from two to four feet. Two of them could not count fingers, neither could they locate the light of a candle at a greater distance than ten feet; these two cases, however, gained sufficient acuteness of distant vision to read the daily papers. The six cases which were complicated are reported in detail, as being the only kind which are instructive.

Case I.—Could not locate a candle at a greater distance than ten feet. Gave an indefinite history of traumatic cataract. I operated without accident. In four days the eye had closed, and he could not tell from any sensations he experienced that his eye had been operated upon. The vision gained only enabled him to tell light from dark objects, and to find his way through the doors of the house. An examination with the ophthalmoscope now showed the track of a piece of nail which had passed entirely through the eye; delicate cyclitic membranes were seen in all directions, although there was no detachment of the retina. Sympathetic disease had already blinded the fellow-eye. This case had a better field of vision, and a better light-perception than the two cases above mentioned. Still, the discrepancy in the amount of vision gained teaches a very practical lesson.

Case II.— Operated upon by a noted and thoroughly competent colleague, with severe iritic complications following. I afterward learned that at the time of the operation sympathetic irritation appeared in the fellow-eye. At the time I saw it all symptoms had disappeared, and I was requested to operate on the other eye. The field of vision was good; the operation was performed. It was slightly complicated by his behaving very badly under ether; the iris was wounded in making the section. The operation was, however, completed without loss of vitreous, and I obtained later a clear pupil. The reaction in this case was much milder after the operation than most of the cases seen on the continent in which the final results were favorable. When the pupil cleared up, however, there were delicate cyclitic membranes deep in the vtireous which were the results of previous sympathetic inflammation. The vision gained after some months was practical, and was better in the second eye than in the first, a circumstance which was, however, purely accidental. If another operator should operate on the remaining eye of Case No. I., he will be obliged to record one case where the visual results were not satisfactory. Should his competitor happen to miss two or more such complicated cases, he could present to the world more charming statistics without being a more expert operator.

Case III.—Old lady, eighty years of age, weight ninety pounds, very feeble. No perception of light in left eye. Operated upon right eye; cataract was hyper-mature. During the extraction of the lens it made a complete revolution, the lower margin presenting at the wound; iritis followed, with closure of the pupil. Good vision was obtained four months later by iridotomy, patient being able to read finest print.

Case IV.—The operation was without accident or complication; never saw an operation go more smoothly. Opened the eye once after removing speculum, and everything appeared satisfactory. Just before applying the bandage I carefully opened the eye to assure myself that the wound was clear of iris. To my surprise I found the wound so bulging that the lid could not with ease be made to slip over the flap. This case I regarded as one of severe hemorrhage into the vitreous from the rupture of a diseased retinal vessel. A few days later I saw a similar case, through the kindness of Dr. David Webster. I gave it as my opinion that the prognosis was unfavorable in both cases. A slow grade of irido-choroiditis destroyed the eye in both cases. The operation in both instances was without accident, and could not have been done with greater delicacy.

Case V.—An old lady of eighty-five years of age had hyper-mature cataracts. She could not count fingers, but had a good field of vision. I removed the lens without accident; the lens was filled with calcareous débris. She could see for some time after the operation, but there was a constant deep injection of the blood-vessels about the ciliary region. The eye looked like one having a foreign body lodged in the ciliary body. As months went on the vision was lost by a low grade of irido-cyclitis. I believe that this eye was lost by calcareous deposits taking place in the ciliary region, or calcareous débris dropping from the lens during its extraction.

Case VI.—Gentleman, seventy years of age. I operated upon his left eye without accident. Six months later operation was performed on his right eye. He took ether badly. After the iridectomy vitreous presented in the wound; the speculum was removed, and profound etherization was obtained. Without using a speculum a careful cystotomy was made, and the lens was delivered without further loss of vitreous. Moderate iritis followed, but at the end of six months he had $\frac{20}{30}$ of normal vision in both eyes. I do not approve of the introduction of a large flat spoon into the eye until all other methods of removing the lens fail. I have never used it myself, but have frequently seen the spoon introduced where I was positive that, had the etherization been carried to the state of profound muscular relaxation, the lens could have been delivered without it. This expedient is said to be a successful means in complicated cases of removing the lens; but those who have introduced spoons into the eye know well that they feel very uneasy about the prospects of that eye. Unfortunately, in every case (six in number) where I have personally witnessed the introduction of a spoon the eye has eventually been lost.

Taking into consideration the possibilities of one operator meeting cases of a complicated nature, of another operator refusing complicated cases, I do not see how the figures regarding the success of one, two, or more hundred cataract extractions show truly the superiority of any operation or operator. I would rather draw a conclusion from the nature of the failures, accidents, and complications which follow an operator's work, than from the tabular results of his successes. Thus one operator may lack expertness, having loss of vitreous with half of his extractions, entanglement of the iris in the corners of the wound in the other half, and make an irregular tear in the capsule in all of this operations, thus giving quite severe inflammatory reactions. Still, he may have the luck

not to meet a case with diseased retinal vessels which will rupture spontaneously when the eye is opened, or a case of hyper-mature cataract which has a lens capsule filled with calcareous deposits, or a case of hemorrhagic diathesis which will bleed without end upon the slightest provocation. If it had been my fortune not to have met with these cases, I could have reported one hundred operations without a single failure. If it had been my misfortune to meet ten such complicated cases as those I have described, I would have had ten failures. The judgment against any one having so many failures would be unfavorable, although it might be unjust.

My results I sum up as follows: *Ninety-six could read the daily papers; two*, from disease existing behind the cataract, could not read, although the wound healed promptly without inflammatory reaction; *two* were complete failures, from causes above detailed, and for which the unbiassed scientist can in no way hold operator or operation responsible.

I have not selected my cases, but have thus far operated upon all cases presenting, irrespective of complications known to exist previous to the operation. The two cases where the light of a candle in a dark room could not be seen at a greater distance than ten feet, were very uncertain in locating the position of the light, and had been advised against an operation by very competent authority, owing to the probable complicated nature of the cataract. While I acknowledge the perfect soundness of the advice, I cannot help calling attention to the instructiveness of the result, namely, vision sufficiently practical to read the daily papers. The prospective question in ophthalmology will be, How shall we treat such cases of cataract where the disease is sufficiently advanced to prevent the individuals from following their usual vocation? The prospects are not inviting where an attempt is made, after a preliminary iridectomy, to bring sufficient traumatism to bear upon the lens by applying the force through the cornea. Is it better to attempt to remove the cataractous lens at any stage, or to resort to some artificial means to ripen it?

If the lens is to be ripened artificially, shall it be done by doing an iridectomy, and then introducing a delicate, polished instrument into the eye, stroking the anterior surface of the lens directly with its smooth surface? or shall we dilate the pupil, and introduce into the eye a curved needle, the surface of its curve being a polished surface with which the lens may be carefully stroked? or shall we carefully make a small discission of the lens for the purpose of ripening it? My experience thus far enables me to say that they may still count fingers up to six feet before one is warranted in exposing his patients to the accidents which may follow any attempt to artificially ripen a cataract. It is better, when they cannot count fingers at a greater distance than six feet, to remove the lens and deal with any subsequent pupillary opacity as occasion requires, after all inflammatory reaction has subsided.

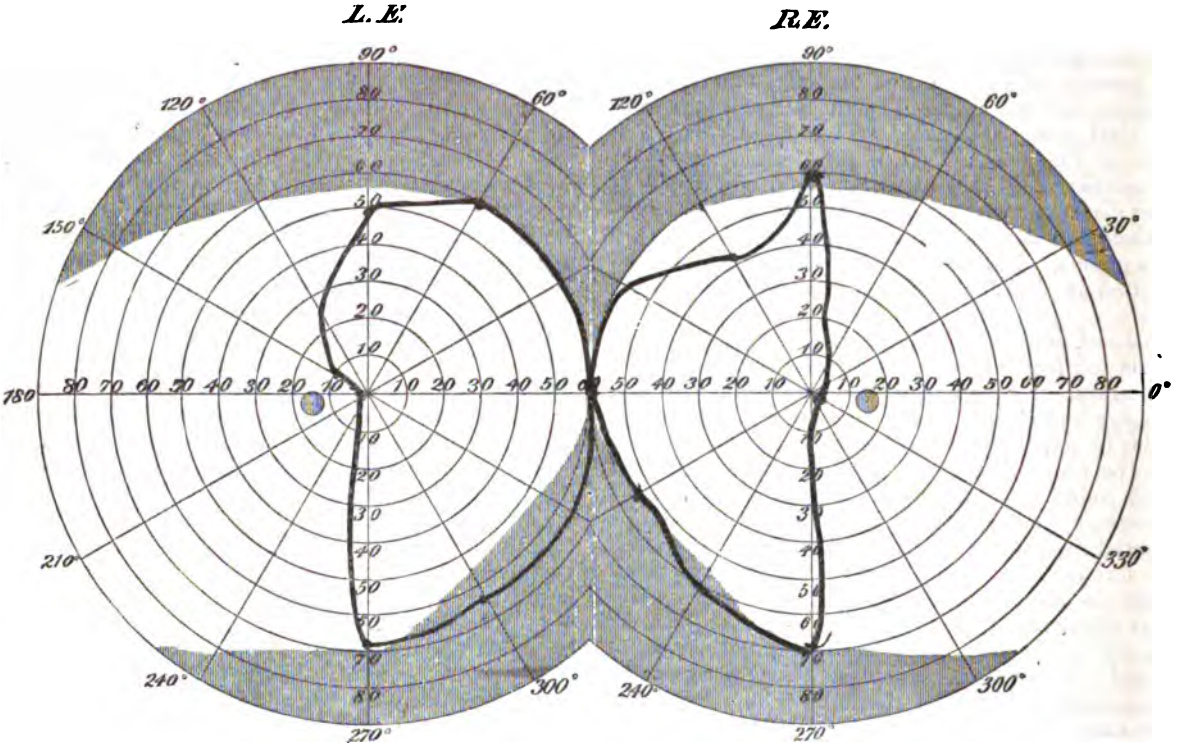
We must look to the experience of the future to decide which of the above methods is preferable.

A CASE OF BITEMPORAL HEMIANOPSIA.[1]

By EDWARD WAITZFELDER, M.D.,

VISITING PHYSICIAN (FOR NERVOUS DISEASES) RANDALL'S ISLAND HOSPITAL, ATTENDING PHYSICIAN NORTH EASTERN DISPENSARY.

MR. PRESIDENT: Cases of hemianopsia of the classic type—that is, temporal in one eye and nasal in the other, have become so frequent during the past few years as no longer to excite comment. It is now thoroughly established, I think, that they owe their origin to a lesion, usually destructive in character, situated in the optic tract, posterior to the optic chiasm, and most usually in the occipital lobe, at its extreme posterior mesial surface; in fact, either involving or in close proximity to the cuneus.



But cases where only one side of the field is destroyed, or the same side of both fields, are sufficiently rare to warrant me in presenting the following case, as it is one in which a positive localization can be made, and in which all the symptoms can be accounted for by the lesion, and where the growth of the lesion is made manifest by the increase of the existent symptoms, and by the development of new ones.

Julius S——, aged eighteen and a half years, native lithographic artist. Paternal history, negative; maternal history, negative, except that one aunt suffers from migraine. Patient states that he was very nervous when a child, but never had convulsions. During early childhood had scarlet fever, but with no complications. At eight years of age had purpura hemorrhagica, which lasted three weeks. Further history negative until fifteen

[1] Read before the New York Neurological Society, November 2, 1886. Case presented.

years old, when he began masturbating excessively, and continued it for one year. At about the same time began to have attacks of migraine, which at first used to come on almost daily, but now occur irregularly about once a week or ten days. Excepting these attacks he was in good general health until early in last April, when he noticed, while at work, that he had a "blur" over his right eye. For this he consulted Dr. Callan, at the New York Eye and Ear Infirmary, who made the following note of his condition at that time: "He had right temporal hemianopsia (almost the whole of the temporal sight being wanting); it grew worse; then the left eye became affected, and temporal vision on the left side was lost." In a note to me, September 16th, Dr. Callan says: "He has now bitemporal hemianopsia. There has been a low grade of neuro-retinitis on the right side for the past two months. His vision now (September 16th) is: R. V., fingers at 15 feet; L. V., $\frac{20}{30}$. The ophthalmoscope shows optic atrophy of right nerve, with some tendency toward that condition in the left nerve."

When I first saw the patient, September 16th (five months after the beginning of his complaint), he presented as follows:

Examination of the heart, lungs, and kidneys, negative. Temperature and pain sense, normal and equal on both sides of face. At one examination I thought the right angle of the mouth was slightly lower than the left, but this, the patient states, is congenital, and is also the case with his mother. General condition, good. Reflexes (superficial and deep), normal. Taste, smell, hearing, color, perception, normal, and equal on both sides. Vision, as above. Hemianopsia complete, except that it "dodges" the fixation point. His chief complaint was of the pain of his hemicrania (which most frequently affected the left side of his head). For the relief of this I recommended the instillation of atropia, to paralyze his accommodation, which I thought was faulty, and the cause of his attacks of migraine. Since that treatment was begun he has had but one slight attack, and that was of short duration.

October 25, 1886.—R. V. $= \frac{8}{200}$; L. V. $= \frac{20}{20}$. Ophthalmoscopic examination: R. E., disk atrophic; vessels of retina small, especially, on nasal side; complete ring of pigment about the disk. L. E., disk atrophic; vessels small, lower and inner vessel, tortuous. Atrophy of retina and disk in both. Color-sense normal.

There is no history of tuberclosis; and while the patient denies syphilis, hereditary or acquired, he has been subjected to a very thorough course of anti syphilitic treatment, sufficiently long continued to exclude a syphilitic lesion as the cause of his hemianopsia.

Although the presentation of a case of cerebral disease without the specimen offers large opportunity for speculation as to the location and character of the lesion producing it, I think we are warranted in drawing the followlowing conclusions from this case: That the symptoms are due to a tumor, which, on account of its rapid growth, is probably sarcomatous in character; that the tumor lies anterior to the chiasm, and that it exerts pressure upon the fasciculi cruciati of both nerves.

The growth of the tumor is comparatively rapid, as it has crossed the mesial line within five months. As yet the fasciculi laterales are unaffected; but I think, as the tumor grows in size, the pressure will be sufficient to interfere with the proper function of that portion of the optic nerve, and complete amaurosis will result.

It has, as yet, involved none of the other basal nerves. The optic atrophy is also due to the pressure of the tumor being most marked in that nerve which has been subjected to pressure longest, viz., the right. The situation of the lesion precludes surgical interference; the prognosis is bad, and if the lesion continues to increase in size as it has the termination of the case is not far off.

MAYOR GRACE has appointed Mrs. Mary Nash Agnew and Miss Grace Dodge Commissioners of Education.

Clinical Department.

A CASE OF QUININE RASH.

DR. M. A. VEEDER, of Lyons, N. Y., writes that he has recently observed a case of quinine rash in which the condition of the skin closely resembled that existing in scarlatina. The patient, without consulting a physician, had for a day or two been taking quinine in small doses for some slight disorder, supposed to be malarial; but, becoming alarmed at the appearance of the rash and imagining that the disease might be scarlet fever, medical advice was sought. The slight malaise and feverishness, together with the cutaneous conditions, formed a group of symptoms sufficiently obscure; but fortunately, for the credit of the profession, the source of the difficulty was at once suspected, and the taking of quinine forbidden. The rash disappeared with great promptness, but returned again repeatedly when, as an experiment, quinine was again administered in small doses.

MALARIAL AFFECTION SIMULATING BASEDOW'S DISEASE.

ANDREW H. SMITH, M.D., New York, sends us the following interesting case: "D. H. S——, a lad eleven years of age, found, while preparing for bed one evening in March last, that the collar of his night-shirt seemed unusually tight. On looking into the mirror he perceived that his neck was considerably swollen. This was brought to the attention of his mother, who came with the lad to see me on the following morning. The swelling had nearly disappeared during the night, but I could still detect a slight fulness of the thyroid gland. At 8 o'clock that evening the throat was found to be swollen again, and I was called. The circumference of the neck, over the most prominent part of the swelling, was then three-fourths of an inch greater than when I saw the case in the morning. The swelling occupied the isthmus as well as the lobes of the thyroid gland. On placing the stethoscope over the tumor a loud bruit was heard with each cardiac systole. The pulse was 110, and there was marked palpitation. There was no exophthalmus. Temperature, 101. The spleen was considerably enlarged. The following morning the neck had decreased again in size, the measurement being the same as on the morning before. The temperature was normal, and the pulse 98. Quinine was administered in full doses during the day. In the evening the swelling again increased, but to a less extent than the day before. After this there was a rapid subsidence of all the abnormal phenomena. A week or ten days elapsed, however, before the fulness in the neck had entirely disappeared.

"The case was seen by Drs. Jacobi and Webster, neither of whom had met with a similiar instance in his observation or reading. It was certainly something entirely new to me, and but for the periodicity, which was so strongly marked, the malarial nature of the affection might have escaped notice.

"This case adds another illustration of the protean forms which malarial poisoning may assume. In a former paper (THE MEDICAL RECORD, May 30, 1885) I have given a number of examples, including one in which valvular disease of the heart was very closely simulated. This case, however, has a value other than as a clinical curiosity, as it lends strong support to the theory which ascribes the phenomena of Basedow's disease to disturbance of function of the sympathetic.

"As the general phenomena of a malarial paroxysm are produced through the sympathetic system, it is a fair inference that the malarial poison in producing the phenomena of Basedow's disease acts through the same medium. The theory that other disturbing causes act through the sympathetic in producing the usual more

permanent form of Basedow's disease thus receives additional support.

"Futhermore, this case may fairly suggest inquiry as to what rôle chronic malarial-poisoning may play in the causation of the ordinary form of this affection."

Progress of Medical Science.

On the Influence of Antipyrin on the Elimination of Nitrogenous Matters.—The steadily increasing utilization of antipyrin as a prompt, convenient, and innocuous antipyretic has naturally stimulated researches as to the physiological aspects of the drug. Among these the influence which this drug exercises on the tissue-changes invites, of course, our special interest. Umbach's experimental studies, executed in the laboratory at Berne (*The Therapeutic Gazette*), are well adapted to enlighten us in regard to the subject in question. Umbach made the observations pertaining to the elimination of nitrogen and uric acid on his own person, in order to obtain very reliable results. By rigorous dietetic measures the observer succeeded in establishing a certain normal figure for the elimination of nitrogenous matters, with but slight daily variations (3 j. *pro die* at the utmost). Uric acid was determined by precipitation with muriatic acid, and the total value of the eliminated nitrogenous matters was obtained by Kieldahl's process, as modified by Petri. After ten so-called normal days Umbach took on two consecutive days 3 j. of antipyrin each, and noted soon a general excitation, insomnia, and a peculiar burning sensation of the skin. The minimum of the bodily temperature was 97 ° F. and the frequency of the pulse decreased about fourteen beats per minute. It was ascertained that antipyrin, while not altering the elimination of uric acid, caused a reduction of thirty grains (corresponding to one drachm of urea) in the figures representing the total of the eliminated nitrogenous matters. A second series of observations instituted on his own body furnishing quite analogous results, Umbach felt safe in announcing the following axiom: "Antipyrin, like quinine and other antipyretics, materially lessens the elimination of nitrogenous matters, and can therefore be said to cause a decrease in the tissue-changes of the respiratory and alimentary systems." While antipyrin was thus shown to reduce the tissue-changes, it was proven by similar experiments that the sulphates (sulphide of calcium) cause an increase in the total of eliminated nitrogenous matters, with a simultaneous decrease of uric acid. Umbach explains this influence of alkaline salts—as in the case of carbonates—as resulting from the increased alkalescence of the juices, and the thus heightened oxidation processes in the body. An investigation of the influence of antipyrin in fever patients, instituted by Wiczkowski, led to very similar results. This observer also noted a considerable diminution of the chlorides in the urine in the apyrexia produced by antipyrin, even if a sufficient amount of chloride of sodium be ingested.

The Existence of Lobar Pneumonia in Very Young Children.—The question is raised by Dr. Carron de la Carrière, whether broncho-pneumonia, which is so common in the early periods of life, has not drawn away attention from lobar pneumonia, as well from the pathological anatomy stand-point as from the clinical. To show the changed views regarding this disease, a few years ago the generally received opinion was that pneumonia in early life was usually of the lobar form; now, with many authors, every inflammation of the pulmonary parenchyma which occurs in a child under two years of age is considered, *a priori*, as broncho-pneumonic. Some well-known French writers are still of the opinion, however, that lobar pneumonia in early childhood does exist, and among them may be mentioned J. Simon, Descroizilles, Rilliet and Barthez, and Picot. The author, in his inaugural thesis, has related several cases of croupous lobar pneumonia which came under his observation, the children being all under the age of two years. Cases of this character usually continue for seven days. Neither the mode by which the disease begins nor the physical examination of the chest can serve to differentiate broncho-pneumonia, at this early period, from pneumonia, but the thermometric curve affords a certain means for making a diagnosis. Jurgensen has shown, by the analysis of a large number of cases, that in two-thirds of all cases the fever declines between the fifth and seventh days, and that in seven times out of eight it is by crisis and not by lysis. Therefore the author concludes that every acute pulmonary affection which comes on suddenly, lasts seven days, and then suddenly ends, is a simple pneumonia.—*The Archives of Pediatrics.*

Cocainomania.—The undue use of cocaine, and the symptoms referable thereto, are at present claiming quite a share of professional attention. Erlenmeyer, in the *Deutsche Medizinal Zeitung*, has studied these symptoms in a number of individuals who have used cocaine to excess, by subcutaneous injection or otherwise. The characteristic symptoms denote vaso-motor paralysis, the pulse is accelerated, the sweats profuse, and dyspnœa and syncope ensue. Failure of general nutrition is very notable, the eyes become sunken, and the skin of cadaveric hue. At a more advanced stage psychic troubles supervene, sometimes requiring personal restraint. Most of the persons so affected had previously been addicted to the abuse of morphia, and cocaine had been resorted to as a minor evil. It would therefore be unjust to lay too large a share of the troubles noted at the door of cocaine; still, enough evidence is at hand to prove that it may be productive of evil consequences, and should only be used as a powerful medicament with circumspection.

The Danger of Syncope in Hot Baths.—It is surprising that deaths by syncope during the use of hot baths are not more common than the coroner's court returns show them to be (*The Lancet*). The peril of faintness by the mere determination of blood to the surface of the body, thus quickly depriving the heart of its usual normal supply and stimulus, is very great. In cases of muscular weakness of the heart, this danger must be imminent whenever the "hot" or even the "warm" bath is used. Apart from this obvious risk, however, there is always the possibility that in weakly or too impressionable states of the nervous system, the peripheral stimulation produced by the application of heat to the whole of the cutaneous extremities of the afferent nerves may so act on the centres as to arrest the evolution of energy by an inhibitory influence. It is doubtful if we lay stress enough on this condition when prescribing the use of such external agents as act on large areas of surface, and strongly impress the nerves there commencing. We know how burns of even moderate severity may kill by the impression they produce on the centres of vitality from the periphery. There is much to learn in regard to the nature and extent of the central effects which may be thus caused. Whether for good or evil, the application of heat or cold to the cutaneous surface is a potent measure, and one that ought not to be recklessly resorted to, more especially in cases of great susceptibility, involving such excitability of the nervous centres as often coexists with fairly good health in a weakly body.

On Extirpation of the Kidney.—At the Berlin Medical Society a paper was read by Professor Ernst von Bergmann, containing *five new cases*, and six others which the author had mentioned in a previous paper, but which have not as yet been published, making eleven in all. The unfavorable prognosis of operations for malignant tumors of the kidney may yet be improved, in the opinion of the author, by advances in the diagnosis and technical execu-

tion of the operation. Malignant tumors greatly vary in their course, some growing rapidly, others very slowly. Some present early metastases, others none at all. In children a very gradual growth is the rule, leading to intermittent hæmaturia, marasm, and weakening diarrhœa; but other cases in which no renal symptoms occur are observed as well. The periods of occurrence of malignant disease, before the fifth and after the fiftieth year, also tend to render the diagnosis easier. The movability of the tumor does not, however, appear constant enough to prove valuable in diagnosis, nor is any constancy to be found in the adhesions of the tumor to surrounding organs. As to technique, the author advocates lumbar incision for the removal of malignant neoplasms, and illustrates the dangers of anterior peritoneal section by two unsuccessful cases. If the tumor is too large to be readily removed an oblique lumbar section is to be made, without incising the peritoneum. In this way he successfully operated in one case for malignant disease of the kidney. Well-developed abscess of the kidney is to be treated solely with the knife. The diagnosis can be made from the presence of a lumbar tumor and one containing pus. The author was able to limit the diagnosis to one kidney in five cases. Two cases of extirpation of the kidney for pyelo nephritis are given, one of which ended fatally. A tumor was present, and evening elevations of temperature were observed in both cases. The urine was comparatively clear, owing to the admixture of healthy urine secreted from the healthy kidney. Both patients were females and attributed their troubles to pregnancy. In one of these cases a stone in the renal pelvis caused the suppuration. In two further cases the cause of suppuration could not be ascertained. These both terminated favorably, as did also another (fifth) case, in which a kidney was extirpated for perinephritic abscess of large proportions. These kidneys did not bleed when their substance was injured, an observation which materially facilitates similar operative procedures. In certain cases, where the pus is concentrated in one point, simple nephrotomy may be preferable to nephrectomy. The former should be preferred if the diagnosis is uncertain, and if it is uncertain whether the other kidney is diseased. One case, in which the author removed the kidney for suppurative processes, ended fatally, and the post-mortem showed that the other kidney was similarly affected. In no case did any infection of the wound occur from the incision into the suppurating mass.—*Annals of Surgery.*

THE INFECTIOUS CAPACITY OF CHRONIC GONORRHŒA.—Neisser, the discoverer of the gonococci, addressed the meeting of German physicians at Strasburg on the subject of the infectiousness of chronic gonorrhœa (*The Therapeutic Gazette*, September 15, 1886). He believes that the question whether chronic gonorrhœa is infectious or not cannot be answered summarily, but can solely be decided from case to case by repeated examinations of the gonorrhœal secretion for gonococci. Examining one hundred and forty-three cases of chronic gonorrhœa for gonococci, he found the proportion of cases giving a positive result to be almost equal to that giving a negative result. Neisser recommends, as the most effective treatment, nitrate of silver in a proportion of 1 to 3,000 to 2,000, or a five per cent. solution of salicylate of sodium, the remedy being best injected with a soft, thin catheter, having at its point several openings. In a case presenting, even on repeated examinations, no gonococci at all, treatment is better wholly avoided. The internal administration of the balsam of copaiba appears to be a useful measure. This recalls a statement of two French observers, Sinety and Hennegue, which is in opposition to Neisser's claim. In their experience injections of nitrate of silver were unable to kill the gonococci found in the urethritis of females. The same negative results they obtained also with permanganate of potassium, ozone-water, and even with corrosive sublimate.

DERMOID CYST OF TESTIS.—At a recent meeting of the London Pathological Society, Mr. D'Arcy Power showed a specimen of a rare form of congenital tumor, a dermoid cyst of the testis. The cyst occurred in a healthy child, four years of age, and had been observed for three years. As the tumor then began to grow rapidly, castration was performed. The cyst was situated on the right side, as was the case in the majority of the few cases which were on record. Within the cyst were numerous smaller cysts, containing gelatinous tissue. The walls contained fat, and, in a few places, calcified cartilage; certain of the smaller cysts contained hairs. The dermoid tumor occupied the whole of the body of the testis, and was enclosed in the smooth and somewhat thickened tunica vaginalis; the epididymis was present.

POISONING BY AN ANILINE PENCIL.—Dr. Arthur Pearce reports the following case (*The British Medical Journal*, October 23, 1886). "H. C——, twenty-three years of age, a discharged soldier, sent for him at 3 P.M. on October 5, 1886. He was then in a state of partial collapse, sweating and almost pulseless. He had vomited, and suffered severely from diarrhœa, not in any way characteristic. He had been subject to dysentery abroad, and had been drinking on October 2d. Dr. Pearce gave him a stimulant stomachic, with two grains of gray powder and five of compound ipecacuanha powder, every four hours, with other directions. On seeing him the next morning it was found that he had revived, and had been sick after every powder, vomiting some blue liquid, unfortunately thrown away. He now showed an indelible aniline pencil, which he had used on October 3d, to push out a fang of a tooth, left after partial extraction on October 1st. On the same day he was seized with vomiting and purging, and just before the doctor saw him he was said to have had an epileptiform fit. He recovered from all symptoms in a few days, only some weakness remaining.

THE CAUSE OF CIRCULAR GASTRIC ULCER.—Dr. Silbermann, of Breslau, has lately made some experiments on dogs for the purpose of showing that the kind of anæmia characterized by deficiency of hæmoglobin in the red corpuscles of the blood is peculiarly favorable to the production and maintenance of circular ulcers of the stomach. Hæmoglobinæmia was produced by injection of various substances, and then either chromate of lead was introduced into a small gastric artery, or a ligature was applied to it, or the internal surface of the stomach was abraded by means of an œsophageal sound carrying a guarded point. All these animals were found to have contracted gastric ulcers, and it appeared to make no difference whether the hæmoglobinæmia was produced before or after the stomach was injured. With the microscope it was found that a number of the red corpuscles were of a very pale color, and that the blood was less alkaline than normal, which is explained by the experiments of Preyer, A. Schmidt, and Rollet, who have shown that hæmoglobin is a weak acid. Dr. Silbermann considers that in the anæmia of hæmoglobinæmia all the conditions are present which are required by various theories for the production of gastric ulcer—namely, arterial anæmia (Klebs), venous hyperæmia of the gastric mucosa (Key), venous stasis in the hepatic vessels (Gunsberg), circumscribed hemorrhages (Virchow), and, lastly, diminished alkalinity of the blood (Leube).—*The Lancet*, October 23, 1886.

A NEW VIEW ON THE CAUSATION OF BRIGHT'S DISEASE.—At a recent meeting of the Académie de Médecine, Prof. Semmola, of Naples, brought forward, in an exhaustive paper, his peculiar views on the causation of Bright's disease. According to this inquirer the nephritis which accompanies the malady is not primitive, but consecutive. Albuminuria is produced independently of alteration in the structure of the kidneys, and even, in his opinion, the real cause of the changes witnessed in those

bodies is due to the constant passing of the albumen through their canaliculæ. Sufficient proof of this assertion might be found in experimenting on the lower animals. If the white of an egg were injected subcutaneously albuminuria was determined, and subsequently nephritis. On the other hand, the skin seems to undergo changes which are striking, and sufficient to account for the presence of the affection. The sweat-glands are atrophied, and the conjunctive tissue of the derma is very proliferous. He deduced from this that the skin was the first organ to be affected in Bright's disease, and not the kidney, and all the attention should be turned toward that structure.

RUPTURE OF THE UTERUS.—At the Obstetrical Society, of London (*The Lancet*, October 16, 1886), Dr. J. G. Swayne gave a description of four cases of ruptured uterus occurring in his practice—two complete and two incomplete. The first occurred about the middle of utero-gestation, and was not clearly traceable to any accident. The uterus appeared to have given way during the effort to expel a putrid five months' fœtus. The woman died undelivered, and a laceration was found in the anterior wall of the uterus, through which the child had passed, so that it lay between the uterus and the bladder in a pouch formed by the peritoneum, reflected from one to the other. In the second case, labor had been induced at eight months, and the rupture had apparently arisen from a transverse presentation and the spontaneous expulsion of the fœtus, in a doubled state. In neither of these cases was the peritoneum torn. The third case was one of complete laceration, and the accident took place during the course of an ordinary labor at full term in a woman with slight pelvic deformity. She was delivered by craniotomy, but died on the fifth day after delivery. The fourth case was one of complete rupture, and occurred in a multipara during an ordinary labor. The child which had partly escaped into the abdomen, was delivered by turning. Laparotomy was performed, the abdomen was thoroughly cleansed, and the wound in the uterus united by several sutures. Death took place within an hour afterward. Dr. Richard Cox then gave the details of the following case: A multipara, aged thirty-eight, was taken in labor at 8 A.M. on May 2d, and was attended by a midwife. Until 3 P.M. everything had appeared normal. The patient then suddenly screamed out, and became faint and sick. The expulsive pains ceased, but an agonizing pain in the abdomen was complained of. Dr. Cox was sent for, and, being from home, arrived about 6.30 P.M. The patient was then moribund. After administering some stimulant, Dr. Cox passed his hand into the uterus, which was empty, and finding a rent of five inches in the anterior wall, he was able to seize a leg and bring the child back from the abdomen, together with the placenta, and to deliver them pretty quickly. There was some difficulty with the head, which was arrested at the brim by a slight contraction. The patient died shortly afterward. She had had natural confinements previously.

PULSATING TUMOR OF THE HEAD, WITH RAYNAUD'S DISEASE.—At a recent meeting of the London Clinical Society (*The Lancet*, October 16, 1886) Mr. F. Treves read notes of a case of pulsating tumor of the head, with Raynaud's disease. The patient, a lad aged seventeen, complained of severe frontal headache, vomiting, and vertigo. These symptoms had existed for twelve months. Both carotids were considerably enlarged, as were also the temporo-facial and internal jugular veins. Over the arteries a loud and harsh bruit was to be heard, and a thrill felt. There was no arterio-venous communication. Certain vessels of the scalp were dilated. The right side of the face was a little larger than the left, the right facial muscles also acted with greater vigor. The right side of the tongue was larger than the left. The right eye was more prominent than the left, and the right palpebral fissrue was the larger. There were nystagmus and occasional diplopia. The left external rectus was weak. The patient was liable to "hot sweats." Over the left mastoid region was a cirsoid aneurism of peculiar character. It was the seat of an intense bruit. The skull beneath the tumor was marked by a number of irregular channels. There was a second pulsating tumor over the occiput. It was venous, and communicated through a fissure on the skull with the superior longitudinal sinus. It was the seat of a certain pulsation, but presented neither thrill nor bruit. The tumor was readily reduced. The sphygmographic tracings of the two swellings revealed remarkable differences. In the venous tumor the respiratory curve was evident. The pulsation in this tumor was derived from the brain. The skull presented certain irregular gaps and fissures, which appeared to have been caused by veins in a state of congenital dilatation.

WHAT CONSTITUTES MALIGNANCY?—In *The Lancet*, of October 23, 1886, Dr. Herbert Snow, of London, concludes his articles on the above subject. Referring to the bacterial hypothesis to account for the phenomena of malignancy, he says: "I have already alluded to the fact that there is a fashion in medical opinion, and just now bacteria are extremely in fashion. Besides, it would be extremely convenient if we could call in the aid of a bacillus or micrococcus to account for the strange phenomena of proliferating protoplasm which we find in cancer. Yet, apart from the fact that no one has yet succeeded in discovering such (although no doubt carefully looked for in innumerable instances), there seems to me a very marked distinction between cancer on the one hand, and on the other all the diseases hitherto referred to bacterial agency. In the latter there has always been either evidence, or else great suspicion of *contagion*, which evidence has of late years become much stronger. To leprosy I need hardly allude. To tuberculosis the suspicion of contagiousness has long attached, although by lapse of time the contagion is weak among Europeans; and it is not till the malady finds fresh and virgin soil, as among the savage tribes, that we are able to recognize the phenomenon in its full vigor. By malignant disease, on the contrary, no suspicion of contagiousness has ever been incurred, unless it may be in a few extremely rare instances, which could hardly fail to occur as a mere matter of coincidence. This fact, to my mind, renders it highly improbable that we shall ever be able to refer the latter to any bacterial excitant." He then briefly sums up as follows: "The phenomena of malignancy result from conditions which irritate normal protoplasm, causeit to proliferate abnormally, and to assume a quasi-independent parasitic vitality. These conditions may be mechanical; in a much larger proportion of cases they are neurotic. That is the furthest point we have yet reached; nor do I see how our knowledge of cancer can make much advance until we know far more than at present about the ultimate properties of protoplasm, and the manner in which this is influenced by states of the nervous system."

NON-GRAVID HYDRORRHŒA.—Dr. James Oliver, writing on the above subject to the *British Medical Journal*, says: Some time ago I drew the attention of the profession to an anomalous uterine function manifested by the discharge, more or less frequently, and in varying quantity, of a slightly opalescent watery fluid from the cavity of the uterus; to this I applied the term non-gravid hydrorrhœa. The secretion or excretion, whichever it may be considered, is truly comparable with that from the renal organ. That the uterus should, by some freak, perform a function wholly foreign to us is quite intelligible. In many of the lower organisms, where structural differentiation is ill-defined, vicarious function is readily fulfilled. The animal may, for example, be turned inside out, with impunity, and the vital state of the organism thereafter be maintained unimpaired. The endoderm, as yet but feebly specialized and set apart for assimilation, now dis-

charges the function hitherto performed by the ectoderm, that of elimination, while the ectoderm, on the other hand, readily fulfils the function of the endoderm, that of assimilation. The reproductive and urinary organs, it is to be remembered, are, by a process of gradual evolution, developed from the middle of the three germinal layers —from the temporary organs named Wolffian bodies. These bodies, when fully formed, occupy nearly the whole of the abdominal cavity, and constitute a pair of symmetrical organs, closely related in structure to the permanent kidneys. It is not, therefore, astonishing that an organ developed in common with the kidneys, from the same primordial structure, should occasionally reveal the manifestation of a function so closely related to that normally displayed by the renal organs.

Treatment of Typhoid Conditions by Benzoic and Salicylic Acids.—At a recent meeting of the Société Médicale des Hôpitaux, M. Albert Robin proposed a new method of treating typhoid conditions in which the organism is always overcharged with the incompletely oxidized residues of nutrition. These residues were eliminated with difficulty, owing to the fact that they are but slightly soluble in the fluids of the human body. There were certain pharmaceutical substances which combined with the nitrogenous residues of the human organism, and rendered them more soluble, and this facilitated their elimination. The principal agents which acted in this way were benzoic and salicylic acids, which, after combining with nitrogenous substances, such as glycocol, passed into the urine as salicyluric and hippuric acids. M. Robin, in his first experiment, studied the physiological action of benzoic acid on combustible substances. He administered benzoic acid to persons in good health, whom he had previously dieted for a few days. Under the influence of this treatment, the solid constituents of urine slightly decreased, and there was also a smaller proportion of urea, consequently its relative proportion to solid matter was lower. These results could not be attributed to a moderating action of benzoic acid on combustion, but to the action of the acid in carrying away into the urine part of the combustibe substances. On another occasion, M. Robin administered benzoic acid to five patients with typhoid fever, in whose urine he noticed an increase in the weight of urea and solid matter. Salicylic acid and salts gave the same results, as also did substances such as toluene, xylene, toluic acid, ethyl, and propylbenzine, which, in passing through the system, become transformed into benzoic acid.—*The British Medical Journal*, October 23, 1886.

Induction of Premature Labor in Severe Albuminuria.—A correspondent of the *Lancet*, reports the following case: Mrs. S——, primipara, aged twenty-six, came under my care on November 5th of last year. The case, on examination, proved to be one of pregnancy, complicated with albuminuria. The confinement was expected about the middle of January, of the present year, thus making her period of pregnancy somewhat less than seven months. The lower extremities were extremely anasarcous, the hands and face slightly so. The quantity of urine passed was much less than natural, was of high specific gravity, and highly albuminous, containing a large quantity of casts—hyaline and blood casts. The treatment consisted of diaphoretics, the hot-air bath, free purgation, and free leeching of the loins. Notwithstanding this, the urine gradually diminished, and became more albuminous, until, on the 27th instant, the quantity passed in the previous twenty-four hours only reached between three and four ounces. Now came intense headache, impaired vision, vomiting, and a condition highly suggestive of uræmia. Under these circumstances, with no labor imminent, I considered the best treatment would be to induce premature labor. This I did in the usual manner, with a gum-elastic catheter, and with the best results, as my patient was delivered within twenty-four hours, from the introduction of the catheter, of a living female child, apparently about seven months' gestation. The after-progress was all that could be desired; the urine was passed in large quantities, and within one week was quite free from albumen.

A Collection of Pine Leaves in the Bronchi Causing Repeated Hemorrhage.—Dr. Axel Key has recorded the case of a man, thirty-six years of age, who had suffered for seventeen years from violent hemorrhage from the lungs. He died in the Serafim Hospital, December 1, 1885, after a short residence there. At the post-mortem examination the body was found to be robust, and not emaciated. In both of the larger bronchi there were a number of circumscribed blood coagula. The right lung was unaltered; in the left there was a slight enlargement of a smaller bronchus, with induration of the walls and immediately surrounding lung tissue. In the cavity of the dilatation there was a quantity of coagulum. Outside the cavity there were six pine leaves partly massed together, but with the points free; the leaves were of a brownish-gray, faintly changing into green, stiff, and with sharp points. The marks of the points appeared on the mucous membrane, and were several millimetres long. The lung was in other respects healthy. The leaves were, in the opinion of Dr. Key, the cause of death, owing probably to the fact that latterly they had embedded themselves more deeply in the lung, or that their position had changed to a new and more dangerous place.—*The Lancet.*

Spurious Venereal Diseases.—Dr. Jordan Lloyd holds views on the nature of the so-called venereal diseases which are at variance with those generally received by the profession. He has just published a series of observations (*The Birmingham Medical Review*, October, 1886) which would tend to show that neither gonorrhœa nor chancroid have a specific virus of their own. Both are contagious; but, he maintains, both may, and do, arise from the inoculation of the products of other inflammations. Syphilis is the only one of the group of venereal diseases which in every case originates, directly or indirectly, from a similar pre-existing primary or secondary lesion. The author, speaking of spurious gonorrhœa and spurious soft chancre, says: "Whether we can distinguish between the true and the false, clinically, is a matter not yet decided, although personally I do not think we can in every instance. Some authors, however, contend that the cases which originate as it were *de novo* are more severe and less amenable to treatment than those which come from true gonorrhœa and chancroid; on the other hand, authorities may be found who hold contrary opinions. My own practice would incline me to agree with the latter. Whether there are or are not reliable clinical distinctions between the true and the false is a matter of little therapeutical interest, inasmuch as the same lines of treatment will serve us in both disorders. The chief object to be gained by the recognition of the true and of the false is a social rather than a professional one, inasmuch as we are often called upon to give judgment on the *nature of the origin* of urethral discharges and penile sores, and, under such circumstances, whenever there is room for the slightest doubt, I say unhesitatingly, in the present state of our knowledge, the infecter is entitled to the benefit of it. I would remove spurious gonorrhœas and chancroids from out the group of venereal diseases altogether, although most of them result from venery, because the term venereal, as at present used, suggests something loathsome and nasty; something which essentially appertains to the prostitute and her visitors." Dr. Lloyd further thinks that individual predisposition is a potent factor in the etiology of venereal diseases, both as regards liability to, and immunity from, those conditions which he has called spurious, as well as true gonorrhœa and chancroid, and he thinks he might take in syphilis

itself. In speaking of predisposition, he does not refer to any of the local predisponents, such as long prepuce, small meatus, liability to herpes and eczema, stricture, etc. Independently of all these there can be no doubt that some individuals contract—and even develop—venereal disease much more readily than do others. There can be no doubt that all physicians, from the nature of their calling, must, during the course of each year, be exposed to infection of one kind and another many hundreds of times. He is not aware that physicians take any particular precautions in the way of protecting themselves from these influences. Immunity does not, in every case, depend upon their having already suffered from attacks of the various infectious diseases. How is it, then, that they so rarely become affected? It is because they have not the predisposition, whatever that word may mean; because their bodies do not present a suitable nidus for the growth and development of the germs of disease. Again, in a class of cases more closely allied, clinically and pathologically, to those under discussion, how often do we see among hospital officers men who are frequently developing crops of hospital furuncles on their hands and arms, others with constantly recurring sore-throat, others with inflamed wounds and lymphatics from *post-mortem* abrasions, while at the same time and under precisely the same conditions there will be men who, year after year, remain free from all such troubles. Susceptibility of one class of individuals to certain poisonous influences, or insusceptibility of the other, must be the explanation. There is nothing more strange in it than in that of many of the well-known "idiosyncrasies;" for example, the poisonous effects of eggs and tobacco on certain persons. In speaking of a class of persons, called (by him) "suppuraters," he says, "these people, apparently of robust health and iron constitutions, frequently have boils; when their lympathic glands inflame, and they often do, the process more often terminates in suppuration than resolution; trivial wounds in such people do not dry up at once, they heal by granulation. I believe these suppuraters contract venereal diseases where ordinary mortals escape them."

Heart Disease and Over-exertion.—Seitz, Corvisart, Hope, Kreysig, Allbutt, Peacock, and many others, have all maintained that heart disease is frequently due to over-exertion. But ever since Bouillaud showed the close connection between heart disease and acute rheumatism the over-exertion theory has been pushed rather far to the background. The object of a recent communication by Leyden (*Zeitschrift für Klinische Medizin*) is to restore it to its merited position. The author gives a short *résumé* of writings on the subject, pointing out the frequency of cardiac ailments among the harder-worked classes. He refers particularly to Peacock, Myers, Da Costa, and others who favor the over-exertion theory. Of course there are objectors. Shrötter, in "Ziemssen's Handbook," remarks that if such a thing does occur without disease of the heart-muscle, it must occur very frequently, and yet the greater part of the human race lives by strong muscular exertion. Spillman maintains that "the heart wearies not. It is formed to beat. That is its *rôle*, its life. It beats sixty, seventy, and eighty years without wearying." According to such views the word "over-exertion" applied to the heart is not physiological. Leyden answers, in substance, that the question is purely a practical one, and proposes to examine it by the light of his own experience. In this examination care must be taken not to take the pathological condition of the heart as a starting-point, but the cause or causes of such a state. Heart diseases due to over-exertion he arranges in three groups: 1. Sclerosis of aorta, aneurism of aorta, arterio-sclerosis. 2. Insufficiency and rupture of aortic valves. 3. Cases of over-exertion of the heart, resulting in injury to the heart itself. As regards (1), over-exertion as a cause is not so very prominent. Still, after eliminating other causes, such as heredity, abuse of alcohol, etc., a number of cases remain that are most probably due to over-exertion. As regards (2). the works of Allbutt, Myers, and Da Costa are conclusive. Particularly interesting are those cases in which a sudden rupture of the aortic valves has immediately followed an over-exertion. He mentioned two cases coming under his own observation, eight given by Peacock, and others by Rosenberg, Todd, Hyde, Salter, Foster, and Pepper. But it is on the third group that Leyden lays most stress, and he devotes the bulk of his paper to an account of ten cases of dilatation produced by over-exertion. One of these must serve as a type. A healthy man in the prime of life, on lifting some heavy weight, is suddenly seized with a feeling of pain and oppression in the epigastrium. This soon passes away, for the time being, but returns with every renewal of exertion, so that the patient seeks relief in the hospital. The heart is found increased in its long diameter, with weak apex beat (dilatation of left ventricle) and great irregularity in its action (*delirium cordis*). After rest and digitalis the dilatation of the left ventrical almost disappears, but the irregularity of the contractions continues. The patient is dismissed with injunctions to avoid over-exertion. He disregards the advice, and, after working two months, the old symptoms return and in addition the extremities begin to swell. With the former treatment the dropsy and other symptoms disappear. Attempts at work, however, are followed by palpitation and a sense of constriction of the chest. The symptoms gradually get worse, the lungs, liver, etc., are affected in the usual manner, and the patient dies with well-marked symptoms of heart disease and its complications. At the autopsy the heart is found more than double its normal size, the increase being mainly in the long diameter, and in the left ventricle. Both aorta and pulmonary artery are found comparatively narrow, but the valves of the heart are sound. The left ventricle is much dilated, especially toward the apex, which bulges out into spherical dilatation. Under the microscope there is visible considerable fatty degeneration, confined to the inner layers. The whole point lies in this: Was the heart healthy to commence with? Fatty, and in some cases fibrous, degeneration would lead one to suspect myocarditis, but both the autopsy and the course of the disease gave no decisive sign of any inflammatory process. One might suggest, with Dusch, progressive atrophy of the heart-muscle, but the microscope shows not a trace of this. Over-distention of the hollow muscle of the heart seems the simplest, the most natural, and therefore the truest explanation of the phenomenon. This view explains, without much difficulty, how the ventricle loses its normal shape, bulges at the apex, and, as the disease advances, is unable fully to empty itself. It also explains how, in some less severe cases, under proper treatment, the overstrained heart recovers to some extent its natural shape and tonicity. Still, plausible though the theory be, it is difficult to prove it. Experiments on frogs' hearts (Pitres) show that, if overtaxed or overdistended, they give evident signs of weariness, but the human heart differs too much from the frog's for the analogy to have much force. The human bladder is a better example of a hollow muscle behaving in a similar manner when overdistended. As regards the manner in which the distention is produced, we know that the rush of blood during violent exertion has been powerful enough to rupture the aortic valves, and it is not difficult to suppose that in similar circumstances the left ventricle finds itself unable to cope with the blood-pressure, and gets overdistended. Of course, a heart weakened by other causes will be all the more liable to give way under exertion.

Dyed Hosiery and its Relation to Skin Irritation.—In a paper on the above topic, by Mr. John R. Ashwell, who is thoroughly familiar with hosiery dyeing as carried on at Nottingham and Leicester, the principal points for this work, we find the following (*The Polyclinic*): The term "dyed hosiery" is limited to those

articles which are dyed after their manufacture, not in the yarn. The main bulk of this consists of either wool or cotton, or mixtures of wool and cotton, known either as "merino" or "shoddy," according to quality. With but few exceptions, cotton hosiery is subjected to a mordanting process, which consists in impregnating, first with tannin, and afterward an excess of some metallic salt, by which means an insoluble tannate is formed. The article is then subjected to a severe friction and rinsing, which removes soluble and loosely adherent particles. Mineral pigments, manganic oxide, lead chromate, Prussian blue, or copper arsenite, are not used. Ferric hydrate is about the only precipitated mineral substance employed. All colors which are easily dislodged by soap are avoided. The tannates precipitated on the goods are highly insoluble, because they have to be subjected to friction and frequent rinsing. The tin and iron tannates, separate or mixed, form the mordants for almost all colors; the two tannates being used on bright colors. This has been done for a long while. Tin tannate is decomposed by alkaline preparations, but no tin passes into solution. Iron tannate is very largely used for the production of blacks with logwood, and has been so used for many years; and when we remember the quantities of iron taken into the system in food, it is difficult to see how the insoluble salts can act as irritants. The coal-tar colors may be divided, for the purposes of this question, into two classes, according as arsenic is or is not employed in the process of making the color. Under the first head may be included magenta, grenadine, aniline brown, and maroon. Popularly, it is supposed that arsenic exists in the hosiery dyed with magenta, but, so far as cotton hosiery is concerned, this is not true, while with woollen hosiery it is so little used that it may be ignored. In 1872, Dr. Springmühl found in fourteen analyses of magenta, arsenic from 6.5 per cent. to 0.25 per cent., but of late years the latter figure has not been reached, and the quantity is generally under 0.09 per cent. Cotton hose, mordanted with tin tannate, rinsed, dried, soaped, and redried, does not show on analysis any indication of arsenic. Of the blues, violets, and greens which are in use, some are met with as double salts of the color base and zinc. Experiments show that the zinc does not remain on the cotton. The German Government, after a searching investigation, permitted the use of all the aniline dyes, except picric acid, for dyeing and coloring even articles of food. Manufacturers of aniline dyes agree that they do not know of any skin-irritating properties of the anilines from workmen whose hands and faces are continually covered with them. In these cases anilines in a soluble form are presented to the body, but in hosiery the colors are in as insoluble a form as the dyer can make them.

Artificial Cocaine.—Merck, of Darmstadt, has succeeded in preparing an artificial cocaine which possesses all the properties of the natural product. Benzoic ecgonine is treated with methyl iodide and a certain quantity of methyl alcohol at 100° C. Benzoic methyl-ecgonine is thus obtained, and this substance is cocaine.—*Phila. Med. Times.*

A Simple Method of Plugging the Posterior Nares.—Dr. R. Bruce Wilson, of this city, writes that he has been led to discard the ordinary instruments used for plugging the posterior nares, and uses instead a small sized gum bougie, No. three to six. About one-third of its length is cut off, and a loop of strong thread is passed through the cut end transversely. To this loop is tied a piece of string, and the bougie is then passed through the nostril. When the end becomes visible in the throat it is seized with forceps and drawn out of the mouth. The plug is now attached to the thread and drawn back into position. If the weather be cold the bougie may be warmed a little at first, but the natural temperature of the parts renders it soft and pliable in a few seconds.

Ulcer of the Leg caused by Potassium Bromide.—Dr. W. H. Haynes, of this city, writes that he has observed ulcers of the leg following the continued use of bromide of potassium, similar to the case reported by Dr. Amidon at a meeting of the Pathological Society. He has succeeded in curing the ulcers and preventing their return by administering small doses of Fowler's solution at the same time with the bromide. In addition to the use of arsenic internally, oxide of zinc ointment was employed as a local application.

Delirium Tremens from Tea.—Dr. Slater has reported in *The Lancet* the case of a young girl who suffered twice from well-marked symptons of delirium tremens. She did not drink alcoholic beverages, but had been in the habit, for a number of years, of chewing tea-leaves, which she said acted as a stimulant and enabled her to perform her work better. At the first attack a large mass of tea-leaves was passed from the bowels after the administration of cathartics.

Prolonged Gestation.—Dr. Steele Bailey (*Archives of Gynecology*) reports a case of gestation extending over ten months, followed by the birth of a fœtus thirty-three inches in length and weighing seventeen pounds. Labor was naturally very tedious, and the child died during delivery. Dr. S. K. Jackson reports a case in which gestation extended from July, 1884, to September, 1885, ending in the birth of a child weighing eight pounds. Dr. Rossie has related the history of a case of gestation induced by a single intercourse, extending over 317 days. The child, which was delivered by the aid of forceps, was a male, measured a little over twenty-one inches in length, and weighed rather more than twelve pounds. It died six hours after birth.

Entomology in Medical Jurisprudence.—At a recent meeting of the Paris Academy of Medicine M. Brouardel made known some curious and interesting facts concerning the dead body of a girl twenty-two years old, which was discovered in a cellar under a heap of straw. The body had lain there about a year, and was in a perfect state of mummification; putrefaction had never set in. One of the limbs was shown at the meeting: it was thoroughly desiccated, the tissues were hardened, and, when struck, sonorous. MM. Brouardel and Audouard attributed this mummification to the dryness of the soil on which the dead body had been placed; but the more important factors were five different species of acarina, which deposited the débris of the envelopes of their eggs and carapace among the dust that covered the dried tissues of the body. M. Mégnin has proved that by studying the generations of acarina which have been at work on a dead body, the date of death can be ascertained. This entomologist, by examining the débris of acarina in a child's corpse, ascertained that death occurred two years previously; a judicial inquiry confirmed this statement. M. Brouardel described the order of succession of different species of acarina which worked on the dead body of the young girl; also the work of destruction accomplished by each separate species. One species absorbs the fluids, another consumes the fatty acids; when a species has finished its work it dies on the dead body, or is devoured by a succeeding species, which in its turn sets to work. Each generation in summer-time lives from six weeks to two months. In the recent Villemomble murder, M. Mégnin established with precision the exact date of the burial of the human remains discovered in the garden. Among the remains a particular kind of ant was observed, which is never found in soil recently disturbed; also the débris of acarina known as *æsophagus echinococcus*, which also furnished a chronological indication; portion of a bulb of a lily furnished further proof. Two years must have elapsed in order that the bulb should undergo the alterations it presented.—*London Medical Record.*

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PARALYTIC ATAXIA OF THE HEART.

FOR the third time in the last ten years Professor Semmola has called to the attention of the profession a peculiar disorder of the heart, of purely nervous origin, which he calls "paralytic ataxia of the heart, of bulbar origin." In a recent communication to the Paris Académie des Sciences he brings, as he believes, new evidence of the existence of this disease.

Paralytic ataxia of the heart is a disease which usually affects men between the ages of forty-five and sixty. It is caused, as a rule, by powerful emotions and venereal excesses. The disease begins with gastric disturbances—an obstinate dyspepsia, followed by gastric catarrh. Then the cardiac symptoms appear, and consist at first simply of systolic weakness and increase of the heart-beat. This constitutes the prodromal stage of the malady, and it may last for one, two, or three years. The patient while in this stage may recover; but if the causes continue, the disease progresses and new symptoms appear. These consist of attacks of palpitation, irregular heart-beat, and respiratory troubles. The patient during an attack develops a marbled discoloration of the hands, forearms, and legs, especially at the finger-joints and about the knees. This symptom is characteristic and differential, and it is due, says Semmola, not to any mechanical disturbance of the circulation, but to a vaso-motor paralysis, and it shows that the vaso-motor centre as well as the cardiac centre in the medulla is affected. The heart shows no enlargement and no evidence of a valvular lesion. The patient suffers from shortness of breath on slight exertion, and auscultation of the lungs reveals crepitant râles at the base. These Semmola believes are also due to vaso motor paralysis, and not to mechanical obstruction. Against this view, however, it may be said that it is doubtful whether the pulmonary blood-vessels are influenced by vaso-constrictor nerves.

The patient also suffers from attacks of suffocation, which arouse him from sleep and force him to sit up in bed, when the symptoms soon disappear. After a time œdema of the feet begins to develop, and this marks the terminal period of the malady. At this time a slight cardiac bruit is heard; but Semmola believes that this does not indicate a valvular lesion, since it disappears with the improvement of other symptoms.

It is stated that post-mortem examination of these cases shows a distinct degeneration of the cardiac ganglia, and also of those parts of the medulla in connection with the vagus nuclei. The disease is a progressive degeneration, therefore, of the cardiac nervous apparatus.

Our readers will see that the paralytic ataxia of Semmola may easily be confounded with simply irritable heart, or angina pectoris, or with a fatty heart. We regret that we have been unable to find Semmola's reports of illustrative cases or records of autopsies. A good many of these are required to give to the disease the distinct clinical and anatomical entity which is claimed for it.

EMETICS AND BLISTERS.

IN an instructive article, entitled "Notes on Some Forgotten or Much-neglected Remedies," by Dr. Caleb Green (*Philadelphia Medical Times*), a plea is made for the more extensive use of bleeding, of tartarized antimony and other emetics, and of blisters. It is quite the fashion nowadays to make a plea for old-fashioned remedies, and perhaps some physicians take a little pride in recommending what is "Early English" or "Louis Quatorze" in therapeutics, but we are quite of the opinion that what the common practice and presumably the common-sense of the medical profession indorsed for a long period of time must have some value, and it is not wise to let the effective measures of the past be forgotten.

Dr. Green believes in treating croupous pneumonia, when sthenic, by the jugulating plan—*i.e.*, by bleeding, and the subsequent use of tartarized antimony or veratrum viride. For tartarized antimony he puts in a special plea. As a cardiac sedative, he ranks veratrum higher, but he adds: "It seems not to be very generally known that tartar emetic is one of our most efficient agents in promoting parturition. When the pulse is tense, the os rigid, the skin dry and hot, the advance of the head slow, I have seen, by the use of small doses of antimony, the most prompt and happy change for the better."

Dr. Green then alludes to the very general abandonment of emetics at the present time, except as simple evacuants of the stomach or air-passages. "Emetics," he says, "for the purpose of evacuating the bile-ducts and stimulating a torpid liver to a more healthy performance of its functions, and at the same time exerting an 'alterative' effect on the glands of the stomach and intestines, are not as often resorted to as formerly. They often relieve in a most evident manner that condition which, for want of a better name (and we scarcely need a better one), we call *biliousness*. But the physician who will, even 'semi-occasionally,' resort to emetics, with all proper precautions, is in danger of being branded a 'fogy.' Yet, with the proper restrictions and precautions, we know that they are powerful for good."

Turning to the subject of blisters, he says that here again the modern physician is too timid in his practice, and often resorts to mustard and poultices when a blister would be better. The blister "is a powerful adjuvant to other antiphlogistic measures, even when resorted to early, in many cases of pneumonic inflammation, and, as I intimated before, where pleuritis is an early and marked complication."

In pleurisy he is particularly positive that early blis-

tering is one of the most potent measures for lessening the inflammation. The blister will even prolong the lives of phthisical patients, by reducing the complicating pleuritic troubles.

SOLANINE—A SUBSTITUTE FOR MORPHINE.

THE many disadvantages of opium and its alkaloids are too well known to require mention, and while they are not sufficient to counterbalance the good effects of these drugs, they are of enough importance to make an equally efficacious and more innocuous substitute a desideratum. According to Dr. Geneuil (*Bulletin Général de Thérapeutique*, September 30, 1886), we have such a substitute in solanine, which is not a newly discovered remedy, but rather one which has fallen, the author thinks, into unmerited disuse.

Solanine was discovered by Defosses in 1821, in the berries of the nightshade (*Solanum nigrum*), and has since been found by others in the stems, leaves, and berries of the bitter sweet (*S. dulcamara*), and other varieties of solanaceæ. It is now prepared from potatoes, by boiling the young shoots in water slightly acidulated with sulphuric acid, and adding ammonia to the warm decoction. It can also be obtained from the parings of very young or very old potatoes. The alkaloid crystallizes in fine silky needles, insoluble in water, and but slightly soluble in ether, oils, and cold alcohol, but dissolving more readily in hot alcohol. It has an acrid taste, and imparts a burning sensation when placed in contact with the mucous membrane of the mouth.

This substance was first employed in medicine by Julius Clarus, of Leipzig, who published a memoir on the subject in 1859. The remedy, however, was never used by others to any extent, possibly because given in insufficient doses. Clarus gave it in doses of from one-tenth to three-fourths of a grain, whereas Geneuil states that it has no appreciable effect unless given in doses of from one to five grains per diem. It may be administered in pill, or the hydrochlorate, which is very soluble in distilled water, may be employed subcutaneously in single doses of about one-half grain, repeated three or four times a day.

The author has tried solanine in a number of cases of neuralgia, rheumatism, obstinate vomiting, spasmodic nervous affections, asthma, and bronchitis, and from the results obtained is led to believe that the remedy will prove to be of the greatest value in the treatment of these and similar affections. The following are the conclusions of his paper: 1. Solanine is a poison to the terminal motor plates. It narcotizes the medulla and spinal cord, causing a paralysis of the terminal, sensory, and motor nerves. By reason of this action solanine is to be classed among the best of the analgesics. 2. The drug may be prescribed in large doses without danger, and presents none of the inconveniences of morphine or atropine. There is no danger of a cumulative action. 3. Solanine does not cause congestion of the brain, even in the aged, and, probably, a like freedom from this danger exists in the case of children. 4. In all cases where it is necessary to calm excitement, relieve pain, or overcome spasm, solanine promises excellent results. It may be given with advantage in the place of morphine for the relief of any of these conditions.

If the author's exalted opinion of this remedy is borne out by further experience, it will indeed prove to be one of the most valuable of recent additions to the materia medica. But medicine is an uncertain science, and others may not meet with such wonderful success as Dr. Geneuil himself has had.

THE ANTISEPTIC TREATMENT OF PNEUMONIA.

THE widely accepted view that acute lobar pneumonia is an infectious disease has stimulated some physicians to try and treat it antiseptically. Professor Lepine, of Lyons, France, seems to have carried out this method most extensively, and he has recently reported his experience (*Gazette des Hôpitaux*, No. 115, 1886). For a year he has treated his cases of pneumonia by pulmonary injections of an antiseptic liquid. He states that he has not lost a case, that in many instances the attack seemed shortened and the severity of the disease lessened. His method is as follows: He takes a long hypodermic needle and plunges it between the ribs over the centre of the hepatized lung, and carries it for about an inch into the diseased tissue. He then attaches a syringe and injects about twenty cubic centimetres (3 v.) of his disinfectant solution. He then withdraws the needle a little and thrusts it into a neighboring part and makes another injection. This process he repeats three or four times, until the hepatized lung has been saturated with two or at most three ounces of the antiseptic fluid. The operation causes a little cough, and sometimes a temporary bloody expectoration. The only marked inconvenience is the pain caused by the puncture. The solutions used have been the benzoate of sodium, which Lepine now discards; the iodide of potassium in concentrated solution, and bichloride of mercury in solution not stronger than 1 to 40,000.

Professor Lepine claims to have established an interesting fact in this connection, viz., that a mixture of antiseptic solutions is stronger than any of the agents singly. Thus, a mixture is made of bichloride of mercury, 1 to 100,000; salicylic acid, 1 to 1,000; carbolic acid, 1 to 1,000; benzoic acid, 1 to 500; chloride of lime, 1 to 5,000; bromine, 1 to 10,000; hydrobromate of quinine, 1 to 2,000; chloroform, 1 to 2,000. This, when mixed with equal parts of bouillon containing *bacillus subtilis*, arrests the growth of that organism, while no one of the constituents used alone will do it. Lepine finds that this solution injected into the lungs of dogs does not cause any irritation, and he proposes, therefore, to use it on man.

THE VERTIGO OF THE KAJAK.

M. HASTRUP, a physician of North Greenland, has observed a curious affection that attacks the Esquimaux. Its name in the Esquimau vernacular is the equivalent of our term "boat-fright;" but Danish physicians call it "Svimmelhed i Kajak," or vertigo of the kajak (*Hospitals Tidende*, August 18, 1886, *Rev. internat. des Sc. méd.*, September, 1886).

The disorder is described as follows: An Esquimau, while sailing in his kajak upon a perfectly calm, smooth

sea, is suddenly seized with a feeling that his boat is tipping to one side. He jumps to the other side to preserve the equilibrium, but this only makes matters worse, and he abandons himself to anxious and even frenzied attempts to keep the boat from tipping. He can no longer fish, and his trouble does not cease until he gets in sight of shore or of another boat. These attacks are not accompanied or preceded by any malaise or nausea. There does not appear to be true vertiginous sensations, but there is rather a hallucination of the sense of equilibration. The disorder attacks the Esquimaux when they are apparently in full health, and it is not accompanied with headaches, tinnitus, palpitations, convulsions, or paralyses. It may last a lifetime, or go away as it comes, quite suddenly. It is a great misfortune to the patient, since he can no longer fish, and is practically an unproductive member of society. The disease has been attributed to the excessive use of coffee and tobacco, but Mr. Hastrup has observed it in men who used neither of these substances.

BONE-GRAFTING.

At a recent meeting of the Société des Sciences Médicales of Lyons (*Lyon Médical*, September 26, 1886), Professor Poncet related a very interesting case of bone-grafting which he had had under his observation for about three months, the successful termination of which opens another field for the operation of the modern therapeutical method of the transplantation of tissues.

The observation was briefly as follows: A boy, eleven years old, suffered from extensive necrosis of the lower epiphysis and the diaphysis of the tibia, for which an operation had been performed, all the necrotic portion having being removed. The periosteum remained more or less altered in the upper part, but below it was entirely destroyed. Two weeks later, while the wound was granulating nicely, it happened that an active and perfectly healthy infant died in the hospital immediately after birth. About two hours after the infant's death M. Poncet removed some seven or eight little pieces of bone, about three-fourths of an inch long, from the humerus and tibia, near the epiphysis, and placed them in the midst of the granulations on the boy's leg. A week later, it was found that half of the grafts had taken, those which failed being the larger pieces, and at the end of three weeks four were firmly adherent. At the second attempt, it being impossible to obtain any human bone, a young and rapidly growing kid was taken, and twelve grafts were sliced from its tibia and placed as before in the granulating tissues. Eight or nine of these last remained adherent and were not absorbed. At the time this case was reported, the wound in the boy's leg was nearly entirely healed, and he had a firm, sold tibia.

In making these grafts the author said that it was necessary to take very small bits, not more than one-third of an inch in length, and about two lines in thickness, as his experience showed that larger pieces acted simply as foreign bodies. The grafts are placed deeply within the granulations, a little incision being made in the granulations for their reception.

This observation is unique and interesting, as it is the first one of successful grafting of bone in an osteogenetic region. In the hitherto published cases the osseous grafts disappeared after a time through absorption, but in this instance they persisted and became the centres of a new bone formation. It would seem as though osseous grafts were destined to render important service in cases of extensive solution of continuity in bony tissue, and that by their means many a limb can in the future be saved which would otherwise be weak and useless, owing to imperfect regeneration of the bony framework.

THE SO-CALLED COCAINE HABIT.

Apprehensions which some have entertained lest there may develop a new and pernicious "habit," will be somewhat allayed by the discussion on the cocaine habit, so-called, which was held at the Neurological Society recently. For over a year the daily papers have been giving currency at times to shocking stories regarding victims of the cocaine habit, and a few reports of a similar kind have circulated among the profession. In Germany, especially, the subject has been studied by Erlenmeyer, and his contribution was supplemented by one of Dr. Borneman, and by that of Dr. Smidt, the latter having been read at the German Congress of Physicians and Naturalists. Altogether, therefore, the question of a cocaine habit has received very considerable ventilation. So far as any conclusions can now be drawn, they are to the effect that the cocaine habit is extremely rare, if it ever exists. The use of cocaine and morphine together, however, has been observed often, and a morbid habit which has been termed "morphine-cocainism" has been developed. This habit is much more serious, physically and mentally, than the morphine habit alone. The addition of the cocaine seems especially to produce hallucinations and other alarming psychical troubles. German and American writers agree upon the baneful effects of this cocaine-morphine combination. The use of cocaine in helping patients to rid themselves of the opium habit is one, therefore, that should be employed with great caution.

So far as pure cocainism exists, it seems to affect, mainly physicians and druggists. To them there will be added soon recruits from the army of habitual drug takers, who are always possessed with the desire to try every remedy that agreeably affects the nervous system.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.

Our readers will be interested in the paper on the above subject which appears in our present issue, and in the very full discussion of it before the Practitioners' Society. Dr. Cleveland presents, with much clearness and force, the views of those who believe in the efficacy of quinine in this disease. On the other hand, it will appear from a perusal of the discussion, that the bulk of medical opinion is just now decidedly against its routine use, and in favor of the expectant plan. It is this view which the Medical Record has been inclined to favor. The matter, however, cannot be said to be definitely settled, and the further discussion of it will no doubt be prolific of much good.

LEFT-HANDEDNESS.

A POPULAR English novelist has written an essay, in which he maintains that man is working great injury to himself by the persistent habit which he has of dextral preference, and urges a return to the ambidexterity of the primitive races. In Franklin's well-known "Petition of the Left Hand" the same idea is also expressed. But despite the arguments and pleas of these and other writers, ninety-one per cent. of civilized beings continue to use their right arms and hands in preference to their left, and in all probability this proportion will increase rather than diminish in succeeding ages.

Dr. Louis Jobert has published an interesting work on the cause and frequency of left-handedness, in which he has collected a number of curious facts concerning this abnormal preference. No purely left-handed race of men has ever been discovered, yet among certain peoples the proportion of those who use the left hand in preference to the right is very large. Among the inhabitants of Pendjab, for example, nearly seventy per cent. use the left hand by preference. The Hottentots and the Bushmen of South Africa are said also to be, for the greater part, left-handed.

Dextral preference would seem to be a mark of racial, though, of course, not always of individual, superiority. "Man," says Moilin, "is the most asymmetrical of animals as he is the most perfect." The new-born child uses one hand as well as the other, but as his faculties become developed he begins to show a preference for one or the other hand, and usually for the right. One of the curious results of the study of crime, which is pursued so industriously by the Italian physicians, is the discovery that left-handedness is very common among criminals. Dr. Marro found that from fourteen to over twenty-two per cent. of convicted criminals were left-handed, while the highest ratio among people of all classes is only about nine to one hundred. Among the insane also dextral preference is found to be much less marked.

It would thus appear that, while ambi-dexterity is theoretically an advantage, it is not to be expected that the human race will ever acquire it, since the tendency in evolution is to differentiation of the two hands, just as it was formerly to differentiation of the upper from the lower extremities. Right-handedness is the price which we have to pay for a higher civilization and greater mental acquirements; while left-handedness would seem to be a step backward and a tendency to a reversal toward primitive man.

FORTY THOUSAND NEW DOCTORS IN TEN YEARS.—In the last nine years 103,598 persons have matriculated as medical students, and one-third of these, or 33,684, have become doctors of medicine. At this rate the total number of doctors for the decade will be nearly forty thousand. For making these, the medical colleges must have received over twelve millions of dollars.

THE CHOLERA.—Over a thousand cases of cholera have occurred at Pesth since the present outbreak began. The English Government has prohibited the importation of rags from Austria-Hungary until April 1, 1887.

News of the Week.

THE MEDICAL EDUCATION OF WOMEN IN EDINBURGH.—The reopening of the Extra-mural Medical School at Edinburgh this fall, was marked by the re-admission of women to medical education in Edinburgh, after an interval of more than twelve years. The first year's course comprises, as usual, anatomy and practical anatomy, chemistry and practical chemistry. The ladies' class consists at present of six students.

A GENEROUS DONATION FOR THE PROMOTION OF MEDICAL SCIENCE.—Edinburgh University has recently received a large donation from Dr. Gunning, of Rio Janeiro, to be used for the establishment of funds for prizes. The sum is large enough to establish eleven triennial prizes of $250 each. The prizes have received names which commemorate previous Professors of the University. They are the Munroe Prize for Anatomy; the Bell Prize in Physiology; the Edward Forbes Prize in Zoölogy; the Hatton Balfour Prize for Botany; the Joseph Black Prize for Chemistry; the Christison Prize for Materia Medica; the Lister Prize for Surgery; the Gregory Prize in Practical Physic; the John Thomson Prize in Pathology; the Simpson Prize in Obstetrics; the Alison Prize for Medical Jurisprudence and Public Health.

THE VALUE OF THERAPEUTICAL RECOMMENDATIONS.—A correspondent writes that, as a matter of curiosity, during the past twelve months, he has tried twelve different therapeutical recommendations which he had culled from current medical literature, other than THE MEDICAL RECORD. (We fear that this was added out of compliment.) Of the twelve, in only one case did he get any satisfactory results (paraldehyde for insomnia). Our correspondent is of the opinion that ninety-two per cent. of therapeutical contributions are quite valueless.

DR. FRANCIS M. WELD, of this city, will spend the winter at Thomasville, Ga., where he will practise his profession.

A SENSIBLE VIEW OF THE TEMPERANCE QUESTION.—Dr. Huntington, rector of Grace Church, preached the temperance sermon in the Church of the Holy Trinity, Fifth Avenue and 125th Street. He said: "The Bible nowhere makes total abstinence necessary to righteousness, and it ill becomes advocates of total abstinence to maintain that anyone cannot be really good unless he is a total abstainer. Temperance does not mean total abstinence, but moderation. Yet it is true that, under the social conditions of this country, the cause of temperance can best be served by the adoption of habits of total abstinence. The remedy of the widespread evils of drunkenness can best be secured by the quiet method of personal example and influence, rather than by noisy and demonstrative parade. I am not one of those who expect that legislation is going to effect a remedy of the evil. We must look to the personal example of abstinence set by men for the benefit of their weaker brethren, to gradually reduce the pitiable evils of intemperance." Well said, Dr. Huntington! Science, morality, civilization, and religion are on your side.

ALLEGED FATAL POISONING FROM LOCAL APPLICATION OF COCAINE.—Dr. W. H. Long (*American Lancet*, November) reports the case of a man thirty-three years of age, suffering from tumor of the larynx, who died from the results of the application of a two per cent. solution of cocaine.

A MEDICAL JOURNAL CLIQUE.—A correspondent calls our attention to an editorial in the *St. Louis Medical and Surgical Journal*, in which the following statement appears: "During the meeting of the American Medical Society in this city last May, a mutual admiration club was organized by the editors and representatives of certain medical journals published in various parts of the country, with the very laudable object of keeping each other well before the reading public. The motto of this club was 'You scratch my back and I'll scratch yours,' and the members pledged themselves to copy as much as possible from each other." We know nothing about the alleged formation of such a ring.

A NEW ANTISEPTIC is being used in the wards of Jefferson College Hospital, writes a correspondent of the *Atlanta Medical and Surgical Journal*. This is trichlorphenol, which is of Russian introduction, and has been favorably mentioned by one of the most prominent therapeutists. Trichlorphenol is extemporaneously prepared by mixing one part of a four per cent. solution of carbolic acid with five parts of a saturated solution of chlorinated lime; the filtering is said to be twenty-five times more powerful than carbolic acid. It is certainly a good combination, and doubtless will prove useful. It has been chiefly employed, freely applied locally, in epidemic erysipelas.

REFRIGERANT AND RHEUMATIC DISEASES.—In the course of a paper on Rheumatism, says *The Lancet*, read at the recent Berlin Congress of Naturalists and Physicians, Professor Senator, who adduced evidence to prove that rheumatism is a specific disease, made some remarks upon the popular acceptation of exposure to cold being a cause of disease (*Deutsch. Med. Woch.*, No. 41). He said that undoubtedly many painful affections of the locomotor system, many neuralgiæ and paralyses—*e.g.*, facial—arise from sudden exposure to cold, especially if the surface be heated and bathed in sweat. But the term "cold" should only be applied to cases where the history of such exposure was quite clear, and the diseases produced thereby should be termed "refrigerant" rather than "rheumatic." The use of the words "rheumatism" and "rheumatic" should then be reserved for such cases of disease as are not due to mere cold, but to a special kind of miasmatic infection, like that which excites acute rheumatism—the prototype of rheumatic disease—and are amenable to specific treatment.

A NEW FLUID FOR PRESERVING MUSEUM specimens, so as to keep their color, size, form, and consistency for several weeks, has been devised by Professor Grawitz. It consists of 150 grammes of sodium chloride, 20 grammes of saltpetre to 1 litre of water; to this is added three per cent. of boracic acid.

MEDICAL ORGANIZATION AT THE ANTIPODES.—It is proposed to hold a meeting of the various scientific societies in Australia and New Zealand in 1888 (the hundredth anniversary of the foundation of the colonies), upon the lines of the British Association meetings, and to form an Australian Association for the Advancement of Science, with similar aims and objects.

WATER AND FEVER PATIENTS.—Dr. Glax, as the result of observations made by him, concludes that the imbibition of water, especially cold water, by fever patients, causes the temperature to rise. The water taken abundantly is not excreted in proportionate amount, but accumulates. With defervescence the water passes off rapidly. Herr Glax will not convince physicians that the old dry method of treating fevers should be adopted again.

A CURIOUS WAGER.—The following is extracted from the *Indian Medical Journal* for July: "Two Mahometans in Hyderabad City made a curious wager the other day, which resulted in the death of one of them. The deceased accepted a challenge that he would stand facing the sun from 8 A.M. to 6 P.M. A certain day was appointed, when a large gathering assembled to witness the *tamasha*, as they styled it. The deceased took his stand, gazing at the sun from the agreed time up to 3 P.M., when suddenly he dropped, foaming from the mouth. Medical aid was soon summoned, but before assistance arrived life was extinct."

THÉ DENGUE IS again at work on the Texans, and we judge, from the very graphic and scholarly leader upon its symptomatology, that the editor of the *Texas Courier-Record* had had the disease himself. The dengue, when in Texas, we are told,

> "Acquo pulsat pede pauperum tabernas
> Regumque turres."

And it seems that since dengue persists in thus knocking at *regumque turres*, the medical editors do not escape. The *Courier-Record* treats the disease with calomel, aloes, and extract of hyoscyamus.

A GERMAN ANATOMICAL SOCIETY has been founded, with Professor Kölliker as President, and Professor Bardeleben as Secretary.

A RUSSIAN REMEDY FOR HYDROPHOBIA.—Dr. Makaveyeff reported to the Society of Russian Physicians seven cases of wounds inflicted by mad wolves or dogs, in which he employed the powdered leaves of *xanthium epinosum* (a species of cocklebur) in ten-grain doses three times a day, combined with Russian baths given every other day (*Russkaya Meditsina*, May 4, 1886). None of the patients suffered from hydrophobia, and they were followed up for from two to ten years after having been bitten. The companions of some of those who were bitten died of rabies, without treatment, within a few weeks. The wounds were not cauterized, and the only prophylactic measures taken were those mentioned, the treatment being continued for six weeks.

BELLADONNA IN ECZEMA.—In a case of infantile eczema, Professor Bartholow, besides directions given as to diet, placed the child (two years of age) upon tinct. belladonnæ, gtt. v., ter die, or sufficient to cause dryness of the mouth. The object in view is to affect the cutaneous circulation, and thus bring about a cure.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, November 8, 1886.

DR. GEORGE F. SHRADY, PRESIDENT, IN THE CHAIR.

DR. BEVERLEY ROBINSON presented a

CASE OF PHTHISIS PULMONALIS, WITH LARGE CAVITY AT RIGHT APEX, TREATED WITH INTRA-PULMONARY INJECTIONS OF DILUTE CHURCHILL'S TINCTURE OF IODINE, COMPOUND CREASOTE INHALATIONS, ETC.

Charles O——, admitted September 29, 1886, twenty-six, single, Swede, wood-carver. Invalid in this hospital from December 18, 1885, to January 18, 1886, for phthisis pulmonalis and has improved. After leaving hospital felt well until June, when the cough became severe and expectoration increased. Two months ago he had two hæmoptyses, one in the evening the other the next morning; the quantity of blood lost was quite large. Since this time he has been growing worse, has been losing appetite, flesh, and strength.

On admission physical examination showed large antrum on right anteriorly; posteriorly signs of antrum in supra-spinous fossa not as well marked as anteriorly.

Left, anteriorly and posteriorly, signs of consolidation and old pleuritis.

September 29th.—℞. Tr. iodi ætherealis, ʒ ij.; crosoti, ʒ j.; acid. carbolic., ʒ j.; alcoholis, ʒ j. M. S. Gtt. x. in respirator, t.i.d.

September 30th.—Antrum injected with ♏ xv. of a solution of Churchill's tr. iodi, j; aquæ, iv.

September 31st.—Cough improved since injection.

October 9th.—Second injection of ♏ xv. as above, cough having increased again.

October 10th.—Marked improvement in cough.

October 17th.—Third injection of ♏ x.; cough improved.

October 21st.—Fourth injection of ♏ xv.

October 22d.—Cough improved.

October 26th.—℞. Tr. physostigmatis ♏ xv., t.i.d. (for night-sweats).

October 31st.—℞. Ferri et quin. cit., gr. v., t.i.d.

November 2d.—Fifth injection, ♏ x.

℞. Whiskey, ʒ j.; glycerini, ʒ ij.; creasoti, gtt. vi. M. S. ʒ ij.; q.3h.

November 3d.—Some improvement in cough since last injection.

It has also been noticed that the expectoration has been diminished since injections have been used.

November 6, 1886.—Patient was presented before the Practitioners' Society last evening. In their presence sixth injection of dilute iodine was made in the second right intercostal space. Immediately after the injection there was a moderate hæmoptysis, possibly in part explained by the heat of the room and the emotional excitement of patient, although the injection itself was undoubtedly the immediate efficient cause of it.

Subsequent to these injections the patient always suffers from slightly increased chest-pains and more frequent cough during one to several hours.

DR. SAMUEL SEXTON'S OPERATION FOR THE RADICAL CURE OF OTORRHŒA.

DR. SEXTON presented to the Society one of the first cases on whom the operation had been performed. She came to him seven years ago stating that the left ear had discharged constantly for thirteen years, having commenced when she was seven years of age. A large polypus protruding from the meatus was removed with a snare, when it was found that the small portion of the membrana vibrans remaining was composed of cicatricial tissue, and that the attic of the tympanum and mastoid antrum were suppurating and contained much granulating tissue. The polypus had protruded through a perforation in the posterior portion of the membrana flaccida. Polypoid masses re-formed and presented at this opening almost as fast as they could be removed, and occasionally, from closure of the outlets, matter accumulated in the attic and gave rise to much pain. The patient had frequent neuralgic pains and headache, and was often very dizzy. The granulation-tissue bled freely when probed, and the ear ran more about the menstrual period. The remains of the drum-head uniting with inner wall of the tympanum formed a cul-de-sac underneath the attic, which always contained more or less muco-purulent matter and inspissated pus collected in the antrum.

Almost uninterrupted treatment during the past seven years only resulted in keeping the drum and antrum free of granulations and purulent matter, but so soon as treatment was suspended for a short time, or on the occurrence of a head-catarrh, the parts were liable to become inflamed, secretions re-accumulated, with earache, vertigo, and headache. In April last the patient, under ether, was operated on. A knife, manufactured by Mr. Ford for the purpose, was made to transfix the membrana flaccida close to the tympanic ring just behind the handle of the malleus, and by sweeping it backward along the margin of the auditory plate the membrane was everywhere detached posteriorly. The blade was then passed through the membrane in front of the malleus handle and carried forward, detaching the remaining portion. The point of the instrument now being directed up into the attic, the ligamentous and other attachments of the malleus and incus were severed; the chorda tympani was then divided on either side. The malleus was now removed with stout aural-dressing forceps.

The bleeding on bringing the malleus away necessitated repeated use of Canton wool to the parts, after which the incus could be seen slightly projecting behind the auditory plate; it was then brought down from its place upon the scute of the attic with the scraper, and was removed with forceps. The malleo-incoidal joint not remaining, this attachment did not require disarticulation. The patient was examined by members of the Society, and stated that the cure was complete and that she heard better than before the operation.

In commenting on the case Dr. Sexton stated that he had found considerable difficulty in seizing, for removal, the incus, which prolonged the operation; but that since employing his aural foreign-body forceps for that purpose, it only required ten or twelve minutes for its performance. Whenever possible the ear should be prepared for the operation by treatment directed to the removal of granulation-tissue and the drying up of secretions. After displacement of the ossicles, carious or granulation-tissue, redundant mucous membrane, etc., in the attic or antrum, should be removed with the attic scraper or cutting curette. The slight pain sometimes following the operation can usually be controlled by one or more applications of a four per cent. solution of cocaine instilled into the tympanum. A rapid and complete cure may confidently be expected from this operation, in from one to three weeks the parts being found healed. It has been found by persons who have hitherto removed portions of the drum-head for any purpose that it was impossible to prevent a greater or less reproduction; but where the membrane has been detached entire, and the malleus and incus excised at the same time, as in the operation described, we had never had any reproduction take place.

DR. CLEMENT CLEVELAND then read a paper (see page 562) entitled

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.

The paper being open for discussion, DR. A. BRAYTON BALL said that he did not see how the argument regarding the destructive effect of quinine on the germs of fever

could be made to apply to typhoid fever. If it is based on the ground that it destroys germs of all kinds, then it ought to destroy those of small-pox, measles, and other infectious diseases caused by a bacillus. But theories regarding the point were, after all, of no value. His experience with quinine was unsatisfactory. He had given it up long ago in the treatment of typhoid fever. As an antipyretic we have better drugs, and he only used quinine as a bitter tonic in period of convalescence.

As regards aborting typhoid fever he did not see how that could be proved. In every epidemic of typhoid there is a large number of cases that abort themselves, so to speak. It is a matter of every-day hospital experience to find cases brought in with more or less of the symptoms of typhoid fever and run a course anywhere from five to ten or fifteen days. The pathology of these cases is obscure; they are not typical cases of typhoid and perhaps had better be called simple continued fever. But the fact that they occur in epidemics of typhoid fever, and in families where there is typhoid, makes it pretty clear that they are only mild cases of that disease that abort themselves. It is a very difficult thing to make a diagnosis of typhoid fever until the patient has been sick for a number of days.

Dr. E. D. Hudson said that until four years ago he was a firm believer in the use of quinine in typhoid fever. He made the effort with it to secure an antipyretic effect and he also employed it to influence the general course of the disease.

Lately his experience had led him to believe that quinine is not an essential part of the treatment. He, however, still employed it early in the disease for its antipyretic effect, and also after the third week for the purpose of securing a more rapid convalescence. But during the second and third weeks, when the nature of the fever is established, the drug is not of any material value, and in some instances it is positively injurious. In the early stage of the disease, before a positive diagnosis is possible, quinine should be given, because there may be a malarial element present.

Dr. Hudson approved of giving quinine in large doses at the outset of the disease, and associating it with a cholagogue cathartic. He had never seen cases treated heroically with quinine, that appeared to be shortened in their course, though he thought that quinine might shorten the convalescence. With reference to

RELAPSES,

he had seen patients who had been treated thoroughly with quinine, but in whom a relapse occurred. This was another argument against quinine having any specific effect. He had been astonished to see in patients in the hospitals, with all their unfavorable surroundings, pretty uniformly good results as compared with patients in private practice, who had everything possible done for their comfort and cure.

On the whole, he thought that except for the occasional use of antipyretics it was well not to use drugs too much in typhoid fever. He had seen some very remarkable illustrations of the advantage of keeping to a strictly milk diet.

Dr. Beverley Robinson agreed substantially with what Dr. Ball and Dr. Hudson had said, viz.: That quinine did not have any special influence over the course of the disease. A case was cited of typhoid fever, then under the speaker's care, in which he was sure that death was to occur, and not from any special complication or high fever, but because the fever seemed to have attacked the heart and enfeebled it. No drugs seemed to have any effect in such cases as this. The patient had never had any marked rise of temperature, so that it was not the febrile heart that produced the cardiac weakness.

The speaker was opposed personally to the use of any drug unless the temperature was very high. If the temperature was 104° it was simply part of the disease, and unless the patient were adynamic he would not treat the symptom. If he had typhoid fever himself he would not allow anyone to give him a drachm of quinine daily any more than he would allow it when he was well. When quinine caused a lowering of temperature, it did it only by depressing the circulation. He thought that the expectant plan was the only rational method of treating typhoid fever. He did not think that statistics regarding its treatment were of any value whatever. At some places and times the fever ran a very adynamic course, in other places not at all so.

Dr. Robinson believed that the

MUSCULAR LESIONS

in typhoid fever occurred without any reference to the high temperature. He had some doubts about the value of digitalis, when the heart was affected, in these cases. You might use diffusible stimulants, but in giving digitalis one might whet up a good fibre but make the poorer fibres still more weak. In conclusion, the speaker reiterated his belief that the only rational way to treat typhoid fever was by the expectant plan—no specific treatment, no antipyretic treatment.

Dr. F. P. Kinnicutt also believed in the expectant plan of treating typhoid fever, and he thought that this plan gave the best results.

In reference to the statement that the mortality from typhoid was less under the quinine treatment, it seemed to him that it would require a very large number of statistics to prove this. He had not seen the statistics in reference to this point.

Dr. Kinnicutt had been accustomed to use quinine in large doses a number of years ago, but he had never felt quite safe in using it, and he had given it up of late. Experiments had shown that it undoubtedly had a depressant effect on the heart in large doses. He usually gave quinine in the early stages of the fever, but even when he had given it in large doses he had never seen any abortant effect.

Dr. Henry F. Walker was accustomed also to give quinine in considerable doses until the diagnosis was made. When he was sure that it was typhoid fever, with no malarial complication, he ceased to use it. He thought that there was sometimes a malarial element all through the course of the typhoid. He cited also an interesting case of a patient who had typhoid, which ran its usual course, not showing any malarial complication until the period of convalescence set in, when the patient developed intermittent fever of a distinct type.

Dr. C. L. Dana said that he had also abandoned the routine use of quinine in typhoid fever, and followed the expectant plan. It was a matter of some interest to note the change of practice in the hospitals regarding this point. At Bellevue ten years ago quinine was in most wards regularly given in all cases of typhoid. Now its use was abandoned as a rule; antipyretics of various kinds were given occasionally, but the treatment was mainly symptomatic and expectant. If there had been any manifest advantage in the quinine treatment it would doubtless not have been so completely dropped. The speaker thought that even in cases where there is a manifest malarial element, quinine did not produce much effect on the course of the disease.

Dr. Geo. L. Peabody did not think that quinine was a desirable thing to use in typhoid fever. He did not think that it had any tonic influence in small doses, any more than would be obtained by any simple bitter. Its effect in large doses he did not think was good. He had never seen it do any harm to the heart, although he thought that it might do so, and even to a strong heart, if the doses were heroic. He had never seen it abort the fever, although several years ago he had given it for that purpose. It was very difficult to prove that cases of typhoid fever had been aborted, but he thought that he had succeeded in some cases last summer by the use of naphthaline. Five grains of this every two hours disin-

fects the intestinal canal. In two cases in which it was given the characteristic symptoms of the disease were well marked, including the eruption and enlarged spleen. In these the fever seemed to decline rapidly under the naphthaline; in two other cases it had no obvious effect. Most of his cases came under observation too late for the application of the treatment. Dr. Peabody was rather of the opinion that the drift of modern writers was against the use of quinine.

Dr. J. B. Hunter said that he was under the impression that the use of quinine in typhoid was very generally abandoned. He had had a very considerable experience with it during the war. On one occasion it had been found advisable not to give quinine to the typhoid patients on account of the difficulty of getting it. The patients seemed to do just as well without it.

Dr. A. A. Smith said that some three or four years ago he placed himself on record as believing, not only that quinine was not of much service in typhoid fever, but that it did harm, particularly in its effect as a cardiac depressant. He did not think that quinine in antipyretic doses was a safe thing to give after the second week. He followed the same plan as the others of giving it in the first week.

Dr. Hudson referred to a case then under treatment in which antipyrin had been used with unfavorable effect. Quinine being substituted, the patient did much better.

Dr. Cleveland said that he was himself conservative in the matter of giving quinine. He thought that it produced its best effects in the early stage of the disease, and he hesitated to give it in large doses throughout the whole course. He was sure, however, that he had seen favorable effects follow its administration, and he believed that in some cases he had seen it abort the disease. Others had reported a similar experience. He believed that it acted more as a germicide than as an antipyretic, although he did not claim that it destroyed the parasite, but that it probably had an influence in inhibiting its activity. It might have this effect on the parasite of typhoid without affecting that of measles or small-pox; and it was this view that he would present in answer to the criticism that if it acted as a germicide to one disease it ought to do the same to that of all other infectious fevers.

Dr. Robert F. Weir exhibited to the Society an

ANTISEPTIC POCKET-CASE.

It was a nickel-plated metal box, of about the size of an ordinary pocket-case. The instruments had metal handles and everything in the interior was of metal, so that the whole could be placed in a dish of carbolized water.

The Question of Contagion in Leprosy.—There is a wide difference of opinion among authorities concerning the contagiousness of leprosy, as there seems to be on many other subjects. The Royal College of Physicians requested an expression of opinion from many physicians familiar with the disease, in all parts of the world, and received a large number of replies. Of these authorities, thirteen asserted positively that the affection was contagious, while thirty-four maintained with almost equal positiveness that leprosy was not transmissible by contagion. In several cases affirmative and negative opinions were given by different physicians residing in the same locality. Nearly all, however, were at one in the belief that the disease was hereditary, though many asserted that it arose spontaneously with nearly equal frequency. As regards the relation of syphilis and leprosy opinions were likewise divided. Twelve asserted their belief in a relationship between the two diseases, while twenty-one could trace no connection between them. These statistics, with many others bearing on the same subject, are contained in a summary of reports furnished by foreign governments to the Hawaiian health authorities.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, November 2, 1886.

The President, Dr. C. L. Dana, in the Chair.

Dr. Edward Waitzfelder presented (see p. 568)

A CASE OF BITEMPORAL HEMIANOPSIA.

Remarks were made on the case by Drs. Pooley, Webster, Starr, Leszinsky, and Bullard.

THOMSEN'S DISEASE.

Dr. George W. Jacoby presented a young man suffering from Thomsen's disease. The patient was a young man from the interior of this State, who had suffered from a peculiar stiffness of the muscles since childhood. If he closed his hands tightly, or drew up his arm or legs, the muscles remained spasmodically contracted for a few moments, and only by a violent exercise of the will could they be slowly relaxed. On striking the body of a muscle deep welts appeared, and remained present for half a minute. The patient was of very muscular build. He suffered no pain. No other member of the family had the disease, so far as known. A full report is to appear later.

REMARKS ON COCAINE AND THE SO-CALLED COCAINE HABIT.

Dr. W. A. Hammond made some remarks upon his personal experiments with some of the preparations of cocaine. He had used only the fluid extract, various wines, and hydrochlorate of cocaine. The fluid extract had been discarded by him since two or three years, mainly because it had been badly borne by the stomach; it excited nausea and was disagreeable to the taste. He then began the use of the wines; but finding that they differed so much in their effects, he gave them up until he suggested to a firm in this city to try to make a wine of coca free from tannin and extractive matters, and they had, he believed, entirely succeeded in doing so. There were two grains of the hydrochlorate of cocaine to the pint of wine. With this preparation he had had an extensive experience, not only upon others, but upon himself. He had used it in spinal irritation with excellent results—results which could not be attributed alone to the wine, but in part to the cocaine. He had used it also as a general tonic and for fatigue. For some time past he had been in the habit of taking a wineglassful at the close of his day's duties, and with benefit. It certainly had a decidedly restorative effect, without being followed by a feeling of depression.

He had also used it in some cases of dyspepsia with a very irritable state of the stomach. He supposed its action was by lessening the sensibility of the stomach, as it lessened sensibility when applied to other parts. It was remarkable to what an extent the irritability of the stomach was overcome by doses of two or three teaspoonfuls of the wine of coca, repeated at intervals of fifteen or twenty minutes until half a dozen doses had been taken. If the first doses were vomited the succeeding ones would be retained longer, until finally they were retained altogether. Cases of irritability of the stomach, due apparently to spinal irritation, had been relieved within a few hours by this treatment. Generally, when he wished in any case to produce a powerful therapeutical effect, he employed the salt.

Dr. Hammond here spoke briefly of the physiological effects of coca, and said that the first writer who had described its effects upon the native Indians of South America gave an exaggerated account of its baneful influence, and his ideas had been copied over and over again without the authority being given, until our minds had become thoroughly indoctrinated by them. There had recently been some very striking stories in the newspapers regarding the injurious effects of the drug upon persons who had become addicted to its use. In order

to determine whether there was any truth in these statements, Dr. Hammond made some experiments upon himself. He first injected hypodermatically one grain of the hydrochlorate of cocaine, which caused an exhilaration of spirits and a happier state of mind than he had enjoyed during that day. He was unable to sleep that night until four or five o'clock in the morning, and when he got up he had a severe headache. He also had a large evacuation of urine. The effect of the drug was to produce an exhilaration such as would be produced by two or three glasses of champagne. The next night he injected two grains, which produced the same pleasant feeling, and in addition he felt an inordinate desire to write. He wrote eight or ten pages of foolscap, and thought it was the best that he had ever written; but the next morning he found that it was the most extreme nonsense. Each sentence was complete in itself, but no two sentences had any relation to each other. The next night he injected three grains, and although he again felt the disposition to write, he did not indulge it, but he talked a great deal and made speeches. He knew what he was about, and was able to restrain himself, but it was pleasant to speak. He went to sleep late and again awoke with a severe headache.

It was a peculiar fact in his case that at the point of injection there always developed redness, swelling, stopping short only of an abscess. He now had several hard spots on his arm, and waited four or five days, when he injected six grains of hydrochlorate of cocaine, three grains at two different places. He then felt decidedly "upset." Yet he did not lose consciousness, nor his relation to things. He gave instructions to the servants correctly. But he did not feel a strong disposition to write or to talk. He was unable to sleep at all that night. The injections were always followed by a large evacuation of urine, by increased action of the heart, and by headache the next day, but without debility. Three nights later he injected eight grains, with about the same effects. The next night he injected eighteen grains, making six different punctures, all inside of twenty minutes. He became intensely exhilarated, and was unable some hours afterward to recall what he did. He was in his office, but in some way got to bed, and the next day he found things in more or less disorder in his office. His headache remained for two days, and there was great action of the heart—palpitation; he could hear it beating on raising the arm to the head. But he experienced none of the horrible effects which were said to attend the use of the drug in large or continued doses; no disposition to murder or commit acts of violence. He acquired no habit; he was able to quit its use at once. And,

REGARDING THE COCAINE HABIT,

he would say that he had given the drug in doses of from one to five grains, for three months, to a lady suffering from exophthalmic goitre, and she was then able to discontinue its use without any difficulty. From a theoretical standpoint, perhaps, cocaine should not be administered in this disease. But it proved beneficial in this case, for the heart's action, which had been increased, diminished, became steadier, and the patient felt much better. He also gave it for some months to a lady addicted to the opium habit, carrying the dose up to five grains injected once a day. It overcame the opium habit, and the patient failed to acquire the so-called cocaine habit. In this and other patients to whom he had administered cocaine, it produced, as in his own case, extraordinary action of the heart, increased temperature and blood-pressure, perspiration, and indisposition to sleep.

He had used a ten per cent. solution of cocaine, soaked in lint and applied to the vulva, for the relief of masturbation. But it had failed in one case, that of a girl four or five years of age. It had been ineffectual in boys, applied to the glans penis.

In three cases of melancholia in women, who refused to speak, injections of cocaine had overcome the prolonged silence, and produced benefit in some cases.

Dr. Hammond regarded the cocaine habit as similar to the tea or coffee habit, and unlike the opium habit. He did not believe there was a single instance of well-pronounced cocaine habit; the patient being unable to stop it at any time, if he chose to do so. If a person were to continue its use for a long time, he should be inclined to look for trouble with the heart rather than with other organs.

Dr. J. B. Mattison, of Brooklyn, could not agree with Dr. Hammond that there was not a cocaine habit. Within a few months Dr. Mattison had had seven cases of the cocaine habit under his care—five in physicians and two in druggists. He certainly believed there was such a thing as cocaine addiction. He regarded the drug as most dangerous and destructive of the tissues. In certain cases its action was more unfavorable even than morphine. The cases reported in the newspapers, he thought, were founded on facts. In one instance he wrote to a physician, asking whether the report was true that a certain doctor had been arrested in the street under the influence of cocaine. The physician replied that it was true; that the doctor was a victim to cocaine. He could cite other similar cases. The effects of cocaine, as far as he had observed, were similar to those described by Dr. Hammond; but besides the action upon the heart, the great volubility, and the unrest, he had noticed hallucinations and delusions, but no homicidal or suicidal tendency. In some cases there was marked emaciation. He thought the effects of the continued use of cocaine were more decided than those of the continued use of morphine. The patients whom he had treated had acquired the cocaine habit gradually, making comparatively small injections several times a day. Dr. Hammond seemed to think that no dose was toxic; but Dr. Mattison regarded Dr. Hammond's case as exceptional, and he would not advise any physician to repeat the experiment.

Dr. J. Leonard Corning thought there was a morbid fear of cocaine spreading throughout the community, and he thought the remarks of Dr. Hammond were timely, as they would tend to allay the prejudice against a most useful remedy.

Dr. L. C. Gray remarked that between Dr. Hammond, on one side, and Dr. Mattison, on the other, there was considerable distance, and he did not know how the question could be solved, except by further experience. Dr. Hammond's statement that no cases had been reported by medical men was a mistake. Cases had been reported in Europe, but they were not numerous.

Dr. M. R. Richard referred to a case of melancholia successfully treated by him with infusion of coca leaves.

The President read a communication from Dr. C. H. Hughes, of St. Louis, in which he said, that most of the cases of cocaine habit seen by him have been mixed cases of opium, cocaine, and alcohol or ether inebriety, combined or alternating; though he knew of cases where cocaine was the chief, if not the exclusive, reliance. But these patients are not trustworthy in their statements. He had not seen a physician addicted to cocaine who stuck to cocaine exclusively. The *finale* has generally been cocaine and opium and whiskey and ether, and all the other neurotic stimulants. Opium was a much more agreeable stimulant, and most patients evidently try to get back to the fatal bliss of opium. He had never relied on cocaine alone in breaking up the opium habit. He had never used cocaine to intoxication, and never regularly. His rule with cocaine cases was to get them back to plain opium, and then break them off that, if advisable.

Dr. Hughes referred to the fact that in some cases cocaine produced poisonous effects.

The President referred to thirteen cases of cocaine habit reported by Erlenmeyer, and to a case reported by

Bornemann. The subject, he said, had recently been discussed at the meeting of the German Congress of Physicians and Naturalists, when Dr. Smidt reported some cases of cocaine-morphine habit, the general opinion was that pure cocaine addiction was rare, but that the cocaine-morphine habit was not so, and was a very destructive and pernicious habit.

Dr. Hammond, in closing the discussion, said he did not deny the existence of a cocaine habit; he only claimed that it was unlike the opium habit, for the patient could break it off at will. He was aware that patients addicted to the use of opium sometimes added cocaine, greatly to their detriment. As to cocaine being a poison, twenty, and even thirty-two grains, had been taken without serious results. He differed from Dr. Mattison, who thought it was more injurious employed hypodermatically; but the patient came under its influence more slowly when it was taken into the stomach.

The President reported from Dr. Herman M. Biggs a case of subacute spinal paralysis, and exhibited specimens of the cord and sciatic nerve. The case was one characterized by gradual paralysis of the lower, and then of the upper, extremities, moderate atrophy, later a slight anæsthesia of the lower extremities—no pain, loss of tendon reflexes, and no bladder troubles. The course was progressive. Death took place in five months. *Autopsy:* The patient was a male, aged fifty-three, not syphilitic. The interest in the case lay in the rarity of the affection and especially of cases in which post-mortem observations had been made. Clinically it resembled mostly the subacute spinal paralysis of Duchenne, although that disease is very rarely fatal. It still more strongly resembled a chronic form of Landry's acute ascending paralysis, and gave support to Ross's classification of, 1, Landry's paralysis; 2, the subacute paralysis of Duchenne; 3, periependymal myelitis; and, 4, progressive muscular atrophy, as inflammatory processes attacking the central gray matter of the cord and distinguished by the greater or less acuteness of the process. The case was interesting also as showing that these paralyses are not always, at least, due to neuritis.

Dr. Dana showed sections of the lumbar and upper dorsal cord, which he thought showed evidences of a low grade of central myelitis. The anterior roots and the sciatic nerve were apparently normal.

The Birth of the Albany Medical College.—In an address entitled "Glimpses of Early Medicine in Albany," published in the *Albany Medical Annals*, Dr. F. C. Curtis refers as follows to the mode of origin of this institution: "The century was only in its twenty-first year when the Albany Medical College legitimately began its existence, in the course of lectures on anatomy, with demonstrations, by one of the fathers of American surgery, Dr. Alden March. There were then twelve or thirteen colleges organized in this country, and half of these are now extinct. In the faculties of two of them, Fairfield and Castleton, Dr. March, and also Drs. James H. Armsby and James McNaughton, of Albany, were leading members. This course of lectures, often encountering serious opposition, was carried on, with the assistance of Dr. Armsby, until, after years of effort, by public lectures and the co-operation of the best citizens, the college was fully organized with an able corps of instructors, a good museum, since grown to be one of the most complete in the country, and a library, now especially rich in rare old books of the early time."

The Influence of Climate and Soil upon Medicinal Plants.—Professor Vogel says that plants do not always contain their characteristic alkaloids when grown under other than natural conditions. Hemlock does not yield coniine in Scotland, and cinchona plants are nearly free from quinine when grown in hothouses. Tannin is found in the greatest quantity in trees which have had a full supply of direct sunlight.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE SIMPLE AND THE ASEPTIC TREATMENT OF HYDROCELE—THE TREATMENT FOR EPIGASTRIC HERNIA—OCULAR GRAFTING CONDEMNED—UTERINE FIBROMATA HEALED BY THE CONTINUOUS CURRENT—PASTEUR WITH HIS HYDROPHOBIA AGAIN.

Paris, November 5, 1886.

In continuation of my last I send you a few short notes from papers read at the French Congress of Surgery. Dr. Tédenat, of Montpellier, in his paper on the treatment of hydrocele, remarked that there is a tendency to substitute the aseptic incision of the scrotum for the time-honored iodic injection for the cure of this disease. After comparing the relative value of these two methods the author comes to the conclusion that both the methods have their advantages and disadvantages, and that they should be employed according to the indications in each particular case. For instance, in simple hydrocele he would employ injections of pure iodine and in small quantities, which he would allow to remain in the tunica vaginalis. When the latter membrane is inflamed, covered with false membranes, and when the development of a hemorrhagic pachy-vaginalitis takes place, the aseptic incision must be resorted to.

In a paper on the cure of epigastric hernia, Dr. Terrier, of Paris, remarked that in general no other remedy is employed for the cure of these herniæ than patience and apparatus, and some surgeons have gone so far as to desist from operative measures as long as these herniæ were not strangulated. Dr. Terrier, however, considers that surgical intervention is perfectly justifiable whenever the patient was a victim of digestive troubles and inconveniences caused by epigastric hernia. The operation, according to the author, presents nothing particular. It is that for the radical cure of the ordinary simple hernia elsewhere: Incision of the skin, opening of the sac, reduction of the part herniated, resection of the sac, scraping and suture of the ring, suture of the skin. Dr. Terrier states that he had resorted to the operation in several cases, and, with one exception, with complete success. In the unsuccessful case there remained a deep fistula, which, however, was a slight inconvenience compared with that caused by the size of the hernia.

Dr. Rohmer, of Nancy, considers that ocular grafting is forever condemned, and he makes this assertion on the following clinical grounds: 1. Transplantation of the eye is contraindicated owing to the possibility of sympathetic ophthalmia. 2. The experimental facts which show that the atrophy of the globe of the eye is an inevitable consequence of its transplantation and its reimplantation, even if sphacelus had been averted and if the ocular grafting had entirely succeeded. The author therefore concludes: 1. That ocular grafting cannot, in present circumstances, prove a successful operation, and that to attempt it is a simple delusion which results in certain failure. 2. Should even the grafting of the entire eye be possible, as it has been pretended, clinical observation, showing that sympathetic ophthalmia is always threatening, would destroy the delusion of a success which would be but of short duration.

Dr. Apostoli proposes to treat uterine fibromata by the application of electricity in the form of a continued current proceeding from one hundred to two hundred and fifty milliampers, which he is enabled to do by rendering the cutaneous pole neutral by potter's clay. The two hundred patients which he treated in this way proved the innocuity of the method which, well applied and continued from three to nine months on an average, produced ninety-five times out of a hundred the following results: Anatomical regression of the fibroma, varying

from one-fifth to one-third, and sometimes even to one-half, but never to total disappearance; durable arrest of hemorrhages, disappearance of the phenomena of compression, and the symptomatic restoration of the patient. The rare cases of failure observed by the author are those of ascitic fibromata. This treatment loses, also, a part of its influence in fibro-cystic tumors and when complications of peripheric inflammation or of the hysterical diathesis in its grave form interfere with the employment of high intensities. Galvano-chemical intra-uterine cauterization is compatible with the later stages of pregnancy.

Liebreich, of Berlin, had announced that lanoline favored cutaneous absorption, but Dr. Aubert, of Lyons, finds that, from his own experience, this substance, far from favoring absorption, on the contrary prevents it almost completely. Consequently, as lanoline does not extend on the skin but strongly adheres to it, as it is not absorbed, it might be made to serve as a vehicle for certain antiseptic substances employed in surgery.

M. Pasteur has submitted to the Academies of Sciences and of Medicine another report on the results of his anti-rabic inoculations. The document is divided into three parts: 1. Results obtained during one year. 2. Explanation of the modifications effected in the treatment. 3. The results or new experiments attempted on animals. In the space of one year to October 31st there have been 2,490 persons treated in Paris. The treatment was at first uniform, and of this number there were 80 English, 9 Germans, 14 Dutch, 165 Italians, 191 Russians, 3 Americans, and 1,726 for France and Algeria. Of these 1,726 persons there were only 10 in whom the treatment has been inefficacious, that which proves the efficacy of the method. Seventeen persons died from hydrophobia among the number of those who did not come to the laboratory to be treated. Those who die in Paris are well known. During the last five years 60 cases of death have been counted in the hospitals of the capital. Since the treatment organized by M. Pasteur, there have died in the hospitals of Paris only two persons, non-inoculated. In cases of children bitten in the face the method is ordinarily insufficient; it is for this reason that M. Pasteur has adopted what he terms his intensive treatment, which he repeats two or three times, in using for the inoculation spinal marrows, beginning with the most fresh and ending with the oldest. The sixteen Russians of whom there has been so much talk in the public press are all quite well. The greater rapidity and the considerably increased energy of the modified treatment, particularly in the cases of bites on the face, have till now completely succeeded.

At the last meeting of the Academy of Medicine the President announced the death of M. Mialhe, the well-known pharmacist, who has been a member of the Academy since 1867.

DENTISTRY NOT A SPECIALTY OF MEDICINE.

To the Editor of The Medical Record.

Sir: The leading article of the Medical Record for October 23d, by W. A. Purrington, Esq., upon the statutes relating to the practice of medicine, incites me to correct a somewhat prevalent but erroneous impression, viz., that dentistry is a specialty of medicine.

That there may be no ambiguity, let me state that by the term dentistry I mean to cover every branch and department known under that name, and a dentist in the full sense of the term in the present stage of the art is one who understands and can practise each and every specialty of it.

A dentist may be an oral surgeon, but an oral surgeon is not a dentist. A dentist may be an excellent anatomist, physiologist, chemist, microscopist, artist, or mechanic, but no one of these practised to perfection makes him a dentist.

Oral surgery, as practised by dentists, is only a very small, but not unimportant, specialty of dentistry; it occupies the debatable ground between dental and general surgery, but as an essential department of practical dentistry its importance has been magnified by those practitioners who are more skilled in surgery than they are in dentistry.

Oral surgery, even in its most comprehensive sense, is not dentistry, any more than dentistry in its most comprehensive sense is only oral surgery.

I therefore affirm that dentistry is *not* a specialty of any other science or art, but is a profession in itself, as separate and distinct from all others as any other calling or vocation is distinct from every other.

Dentistry is a profession, because it is a vocation of beneficence. This is so patent that I need not attempt to prove it or enlarge upon it. Millions are on the earth to-day who call us blessed, because of the comfort we have given them and the benefit they have derived from us.

Dentistry is a profession by universal acknowledgment; it has been an organized science for more than a generation, and has been called a "profession" by common consent by the cultured and uncultured as well as by its own practitioners.

Even the highest authorities in medical literature refer to dentistry, not as the "dental specialty of medicine," but as a "profession."

The designation of it as a "profession" is not an assumption like that of the barber, the dancing-master, or the itinerant phrenologist; it is entitled to the distinction because the mastery of it as a science or an art involves a considerable knowledge of many other sciences.

Its resources are not only nearly all the sciences, but in an equal degree nearly all the arts. Hardly an art, from plumbing to sculpture, but has its prototype in some branch of dentistry, and yet it is not a department or specialty of any one of them.

While a large part of its processes are of a mechanical nature, it is not a mechanical trade, inasmuch as a mechanical trade is governed by fixed rules and a routine of labor, in which each workman is a servile imitator of the pattern given him, and can become master of his trade without any knowledge beyond its details.

His brain is not constantly called upon to apply established principles to entirely new conditions and surrounding circumstances—the distinction which I would make between a trade and a profession being, that while the latter may employ the identical methods of the former, the judgment and the inventive faculties of the practitioner must be in active exercise to apply those principles and those methods to constantly varying conditions. The predominating feature and characteristic of dentistry, that which removes it farther than all else combined from medicine, is the mechanical nature of its methods. So much alike are the methods of the gold and silver jeweller to dentistry, that the acquirement of one would be considerable of an education for the other. Yet making gold and silver jewellery is not a profession; it is a trade. Dentistry, while using the same mechanical processes, is obliged to add invention in their application to every case. The *methods* of the painter and the sculptor are the methods of the mechanic. But portrait-, figure-, and landscape-painting and sculpture are branches of fine art, and the vocation is a *profession*, not a trade. That which dignifies the practice of dentistry, bringing it above ordinary mechanics, is the fact that the operations are performed upon living organisms, and that which makes it professional is the knowledge of anatomy, pathology, etc., which discriminates in directing the mechanical treatment. Dentistry is not a specialty of medicine, because its chief and predominating characteristics are utterly unlike anything which is taught in medicine, requiring for their successful performance natural faculties and acquirements that are entirely distinct from the practice of medicine. That which makes dentistry as a science kindred to medicine as a science, is

the fact that it deals with a small but important part of the human economy. But the equally great fact that its methods are entirely distinct, requiring special education and special training, makes it an independent science and in no sense subordinate to the other. The training of a dental student for his professional career is totally unlike that required by a medical student. Medicine involves hospital and bedside practice, but dentistry involves, along with the study of the sciences, training of the fingers, first, second, and all the time.

Dentistry became an independent profession, not through any spirit of rebellion against the medical profession, but from sheer necessity. The fathers of dentistry in this country were graduates of medicine, and hoped to dignify their vocation by grafting it upon medicine and have the theory and practice taught in medical schools. Their application was refused, and the history of dentistry as an independent progressive and scientific organization began, and to-day the wondrous fact is the astonishment and admiration of the scientific world. We have more than a dozen independent institutions of learning which teach everything that a dentist need know, and in separate institutions, and no other, can a dental student obtain that knowledge. Those universities which teach dentistry teach it as a separate department from medicine, and confer a distinct degree. We have an independent literature, which is not indebted to medicine so much as it is to other sciences. Anatomy, physiology, histology, microscopy, chemistry, etc., are not medical studies. They are sciences, upon which medical and other studies are based.

We have an independent journalism larger than the total of medical journalism when our history began. We have independent national, state, and local organizations that are vital, active, and progressive; and what might once have been by dentistry taught and practised as a specialty of medicine cannot now in the very nature of things ever be brought about. If to-day all the medical colleges, together with the entire medical profession, were blotted out, the practice of dentistry would not be injured in the least; nor would humanity suffering from diseases of the teeth be one whit the less cared for. Dentistry has come to stay—not as a specialty, but as an honorable, dignified, learned, scientific, beneficent, and independent profession. Dental colleges have come to stay, and the degree of D.D.S. has come to stay.

The question of our participation in the forthcoming International Medical Congress is being forced upon us. A year or so ago the then secretary stated that there would be no Section of Dental Surgery, because dentistry was not generally recognized as a specialty of medicine. Now, for some reason or other, it seems desirable to the Council of that Congress that we should take part in it, but, as an *independent* profession, we have no business there. As dentists we are out of place. A Section of Oral Surgery is eminently proper, and if there are oral surgeons enough in the world who want a section all to themselves, by all means let them have it, but do not hitch dentistry on to the tail of the medical kite to give it ballast for a higher flight.

At a large convention of dentists held in Rochester on the 26th ult. (October, 1886) the following preamble and resolutions were passed *unanimously:*

Whereas, Dentistry in America is practically an independent profession, and not subordinate to any other; and,

Whereas, All of the great attainments in dental science have been reached through separate literary, educational, and scientific organizations; and,

Whereas, Dentists throughout the world look to their professional confrères in America for the further advancement of dental science; therefore,

Resolved, That in the interest of dentistry as an independent profession, immediate steps be taken looking to the formation of an International Dental Congress, to be held in this country, and to which every reputable dentist in the world shall be entitled to admission and all its privileges.

Resolved, That a committee of one be appointed from each society represented in this convention, who shall form a joint committee, whose duty shall be to co-operate with similar committees from other societies for the purpose of establishing such a congress at as early a date as arrangements can be made which will make such a congress a credit to the dental profession in America.

Resolved, That we recommend the City of New York as the most suitable place in which to hold such a congress.

NORMAN W. KINGSLEY, D.D.S.,
President of the New York State Dental Society.

ADVERTISING A SPECIALTY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Your paper, always instructive in its editorial department, contains in its article "The Question of Advertising a Specialty" (p. 495), this clause: "This practice [of announcing one's specialty or specialties on one's card] is not sanctioned by the profession in general, and fortunately is not widely adopted. It opens the way to a great deal of abuse, and may speedily bring the physician to the level of the ordinary advertising charlatan." What is meant by "the profession in general?" Presumably that of the United States. Do not physicians in various parts of the United States advertise their specialties on their signs? And if on their signs, why not on their cards?

In Germany, in university towns as well as in non-university towns, it is no uncommon thing to see signs like this: "Dr. So-and-so, Practical Physician and Specialist for Diseases of the Nose and Throat," etc. Now, as far as my experience goes with men who announce themselves according to the sample just mentioned, not any of them were anything like quacks, but honorable men and able physicians. My experience may be only an isolated one, and thus be of no account. You speak of *abuse* and charlatanism, to which this card announcing *may* lead; but is such talk complimentary to "the profession in general" that does not sanction this mode of advertising? Is the integrity and honesty and the implied humanity of "the profession in general" only a very watery thing and untrustworthy—no good unless backed by fear? Is it liberal to assume that "the profession in general," is something inorganic. Of course, there is nothing so common as human nature, but it cannot be denied that even human nature is something more than purely mechanical. . . .

Very respectfully yours,
ADOLPH RUPP, M.D.

[Our correspondent concludes with an argument that writing as a means of advertisement may also be abused. To his criticisms we must reiterate our opinion that good sense and propriety demand that physicians should not advertise publicly their specialty. In this country the practice is only adopted by quacks, and American medicine has not fallen so low that it needs to follow their methods.—ED.]

THE HEALTH OF MARSEILLES.—During the year 1885 the death-rate of typhoid fever was 17 per 100,000 inhabitants in London and in Berlin, 14 in Vienna, 63 in Paris, and 149 in Marseilles. In the latter city there were 91 deaths per 100,000 from small-pox, and a much larger proportion than this in 1886. The figures for diphtheria in Paris were 80, and for Marseilles 98; for scarlatina, 7 in Paris, and 23 in Marseilles. The latter city is the most unhealthful in France, and it would seem as though the authorities would finally wake up to the fact, and would exert themselves to enforce measures designed to render the city a fit place for human habitation, for which it now seems very poorly adapted.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 7, to November 13, 1886.

WRIGHT, J. P., Major and Surgeon. From Department of Texas to Department of the Missouri, for duty as Attending Surgeon at Leavenworth Military Prison, Fort Leavenworth, Kan. S. O. 257, A. G. O., November 4, 1886.,

FORWARD, W. H., Major and Surgeon. From duty as Attending Surgeon Headquarters Division of the Missouri, and Examiner of Recruits at Chicago, Ill., to Department of Dakota. S. O. 257, A. G. O., November 4, 1886.

HUBBARD, V. B., Major and Surgeon. From Department of Arizona, to duty as Attending Surgeon at Headquarters Division of the Missouri, and as Examiner of Recruits at Chicago, Ill. S. O. 257, A. G. O., November 4, 1886.

LORING, L. Y., Captain and Assistant Surgeon. Sick leave of absence further extended three months on Surgeon's certificate of disability. To be relieved from duty in Department of California, and on the expiration of his present sick leave of absence, will report by letter to the Surgeon-General of the Army. S. O. 262, A. G. O., November 10, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Assigned to duty as Attending Surgeon in San Francisco, Cal. S. O. 94, Division of the Pacific, November 1, 1886.

PERLEY, HARRY O., Captain and Assistant Surgeon. Granted leave of absence for four months on Surgeon's certificate of disability. S. O. 257, A. G. O., November 4, 1886.

BARROWS, CHAS. C., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer St. Francis Barracks, St. Augustine, Fla., for duty at Fort Marion. S. O. 180, Division of the Atlantic, November 10, 1886.

PHILLIPS, JNO. L., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply at Headquarters Division of the Missouri for an extension of one month. S. O. 116, Department of Dakota, November 2, 1886.

EWING, CHAS. B., First Lieutenant and Assistant Surgeon. Ordered from Fort Supply, Ind. Ter., to Fort Leavenworth, Kan., for duty. S. O. 126, Department of the Missouri, November 6, 1886.

IVES, FRANCIS J., First Lieutenant and Assistant Surgeon. Ordered to proceed to, and take station at, Fort D. A. Russell, Wyo. S. O. 145, Department of the Platte, November 4, 1886.

PROMOTION.

O'REILLY, ROBERT M., Captain and Assistant Surgeon. To be Major and Surgeon, November 1, 1886, vice Clements, deceased.

APPOINTMENTS.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon, November 5, 1886.

ANDERSON, CHAS. L. G., First Lieutenant and Assistant Surgeon, November 5, 1886.

SULPHATE OF IRON IN DIARRHŒA.—Mr. Rothwell (*British Medical Journal*) suggests the use of sulphate of iron in the treatment of diarrhœa in children. The author has used this drug with much success in the choleraic diarrhœa of adults, and thinks that it ought to be used for those cases of infantile diarrhœa where there are offensive stools. Should there be vomiting, it would be better to give the iron by injection.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 13, 1886:

	Cases.	Deaths.
Typhus fever	1	0
Typhoid fever	16	8
Scarlet fever	34	4
Cerebro-spinal meningitis	9	9
Measles	288	43
Diphtheria	117	47
Small-pox	0	0
Yellow fever	0	0

THE TREATMENT OF FELON.—Dr. W. H. Halbert is an advocate of the conservative treatment of paronychia. He treats it with salt and turpentine, allowing the mixture to remain on the finger several days, moistening the salt twice a day with the oil of turpentine. In the forming stage of a felon he wraps the finger firmly with surgeon's silk isinglass plaster, and applies the mixture over it, leaving it undisturbed for two or three days.

A SOLID PURGATIVE.—Professor Bartholow tells of an old soldier who always carried about with him a bullet, which he had used as a cathartic, when occasion required, for forty years. It probably acted as an exciter of peristaltic action, by reason of its weight.

AN ASYLUM FOR EPILEPTICS was opened a few months ago in Rueti, Switzerland. It has accommodations for fifty patients, and the beds were rapidly filled after the opening of the hospital. The medical director of the institution is Dr. Koelle. This is the first epileptic hospital established in Switzerland.

THE LEPROSY HOSPITAL IN HONOLULU.—The annual report of the Hawaiian board of health to the legislative assembly, for 1886, contains a glowing tribute to the good work of the Franciscan Sisters of Charity in the branch hospital for lepers. In former years, before the sisters came, several policemen were required to maintain even the semblance of order, and a night watch was required. There was a call of the watch, a change of guard, ringing of bells, and the condition of the yard was like that of a fort rather than that of a refuge for the sick and suffering. At the present time this has all been dispensed with. Neither guards nor watches are required, except that two of the patients act alternately as porters at the gate, and to keep watch that the rule concerning the separation of the sexes is enforced. Two infirm patients are the only guards needed. It is understood by all that the sisters are ready to answer any call at any hour of the night, and consequently they go to rest in confidence that there is kindly help near by, and this assurance has led to the quieter aspect observable inside the Kakaako enclosure. The former noisy clamor of an excitable and distrustful body is all changed to the peace and silence of an establishment reposing in a secure sense of affectionate trust. The hospital is in charge of a community of Franciscan Sisters, formerly residing in Syracuse, in this State.

"THE HYMEN IN MEXICO" is the rather sensational title of a recently-published work. The author states that the complete absence of the hymen in Mexican virgins is very rare. Apart from this, however, the book contains no startling items of information, but treats of the subject chiefly from a medico-legal point of view.

THE DANGER OF NAPHTHALINE IN RENAL DISEASES.—Dr. Charles W. Purdy says that, contrary to the statements of M. de Pezzer, naphthaline is a dangerous drug to use in cystitis, prostatitis, and pyo-nephritis.—*Journal of the American Medical Association.*

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Original Articles.

THE PRINCIPLES AND THE PROGRESS OF MODERN THERAPEUTICS.[1]

BY WILLIAM H. DRAPER, M.D.,

NEW YORK.

ANNIVERSARIES which only serve to emphasize the signs of slow but inevitable dissolution, or those which simply startle us with the flight of time, and chide us with the loss of opportunities, are certainly melancholy occasions; but anniversaries which mark, with each recurring year, in a body like this Academy, increasing vigor, higher aims, and better achievements, inspire gratitude and hope and lofty purpose in the work of the future. These surely are the sentiments which this occasion inspires. As the Academy becomes venerable in years, it renews its strength at the fountain of youth. As those who have borne the burden and heat of the day rest from their labors, the stimulating force of their example manifests itself in the keener efforts and higher aspirations of their successors.

Death has, to be sure, made sad havoc in our ranks during the past year. Three of our former presidents and four of our active members have vanished from our sight. The venerable James Anderson, one of the founders of the Academy, and one of its steadfast friends, will be long remembered as the impersonation of Æsculapian dignity and the exemplar of professional ethics. The familiar form of the veteran Post, which haunted these halls and the operating theatres of our hospitals, almost to the day of his death, will long remain a tradition in the medical history of this city. Age could not wither his enthusiasm, nor custom stale his interest in his daily work. As we recall the eagerness with which he entered into every discussion, the perfect candor with which he related his clinical experiences, successful or unsuccessful, and the ardor with which he displayed the pathological curios that were always concealed in the folds of his garments, we must ever admire the zeal and the integrity of his long and useful life.

The name of Austin Flint has taken its place upon the roll of fame. Heberden, in the introduction to his commentaries, likens the life of a physician to Plutarch's description of the life of a vestal virgin, which was divided into three portions. In the first of these she learned the duties of her profession, in the second she practised them, and in the third she taught them to others. The period during which Dr. Flint was engaged in what Heberden regarded as the appropriate duty of the final stage of a physician's life was a long, laborious, and most honorable one. With what an elevated purpose he fulfilled its duties! How fitly he illustrated in his career the dignity and influence of his calling! It was our privilege to know and feel the force of his example, as well as to enjoy the ripe fruit of his experience. It should become our sacred duty to emulate his virtues, and to labor as he did, to the hour of his death, in the service of his fellow-men.

From a younger generation, whose paths he served to direct, we have to mourn the loss of several of our most brilliant and promising fellow-laborers. Of these McBride was perhaps the best type of the modern clinical physician. To a genius for investigation he added an enthusiasm which tolerated no restraint and shrank from no sacrifices. He was an alert and accurate observer, accomplished in the application of all instrumental aids to precision in the exploration of disease, and a zealous and sanguine believer in the possibilities of rational therapeutics. His life was too short for the realization of the achievements which it promised, but long enough to furnish an inspiration to many who felt the directing force of his intelligence and the stimulation of his enthusiasm.

It has seemed to me that Flint and McBride illustrated in their careers the changes which the progress of scientific medicine has made in the type of the practical physician. Flint exemplified the influence of the progress of pathology upon practical medicine. He did his work with few tools, but, through his knowledge of lesions and the natural history of disease, he saved the victims of many maladies from the additional miseries of useless medication. Though by no means a sceptic in therapeutics, he was more or less dominated by the idea that pathology is the sole basis of the healing art, and that the *vis medicatrix naturæ* is the best doctor in many diseases.

McBride, on the other hand, represented a later generation, which, while it recognizes the dependence of rational medicine upon pathology, still believes that the art of therapeutics has an independent growth of its own, based upon the experimental study of the effects of remedies, and further, that therapeutics is not without its value as a means of shedding light upon the causes and effects of disease.

It was partly from my reflections upon the essential qualities which distinguished these two late conspicuous members of the Academy as physicians, that I have been moved to choose, as the subject of my address on this occasion, "The Principles and the Progress of Modern Therapeutics."

It is always a profitable exercise to review from time to time the advances that are made in the science of disease, and the corresponding progress in the art of healing, and to note especially how nearly the art is itself approaching the dignity and stability of a science. It must be acknowledged that, if such a review is made at short intervals, we are sure to find that, through the imperfection of the science of disease, the ancient traditions still control in large degree the art of therapeutics, and that much of our medication still has no other justification than the routine sanctified by long usage, and no other basis than speculation as to the relation of cause and effect. At the same time, the discoveries of each succeeding year, in all the branches of knowledge which are tributary to pathology, are modifying therapeutic methods; they are exploding many of our fondest delusions, and slowly but surely giving precision to the art of preventing and curing disease.

It has been truly said that "art, even of the lowest and most inarticulate kind, is always tending toward a scientific form, to the discovery and assertion of itself; and science, if it deserves the name, is never absolutely barren, but goes down into some form of human action, becomes an art; the two run into each other." This is eminently true of the science and art of medicine. The art had its birth long before the science came into being; the science had its origin and still draws its inspiration from the art. The distinction, therefore, between the science and the art of medicine is an arbitrary one. The science is daily becoming more practical and the art more scientific, but it is still a melancholy fact that

[1] Anniversary discourse delivered at the New York Academy of Medicine, November 18, 1886.

the scientific practitioner of the present is often a very poor doctor, and the pure artsman, as Plato calls him, may be a very successful one.

Broussais remarked that "the real physician is the one who cures; the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist." There is a wholesome truth in this observation which it would be well for the faculties of our colleges, as well as for those who consider themselves eminently scientific practitioners, to take to heart, and it is this: That neither anatomy nor physiology nor a knowledge of the causes and effects and natural history of disease, neither the botany nor the chemistry of medicaments, nor even skill in diagnosis, can make the possessor of them a master of the art of healing. They constitute the essential equipment of a physician; they do not make him a physician. They define the objects of his craft, and fix the limits of its possibilities. He would, to be sure, be helpless without them, but he is worse than helpless with them until he has learned how to use them, how to construct out of them the special art which enables him to cure disease.

To a certain extent, the tendency of pure pathology has been to diminish faith and create scepticism in the possibilities of therapeutics. It is a common reproach to the teachers of the theory and practice of medicine, that they spend much time and pains in describing the lesions and the natural history of diseases, and dismiss the principles and means of cure with few and distrustful words. The reason of this is that pathology only furnishes the object to therapeutics—it does not properly embrace or direct it. The pathologist is essentially a naturalist. He investigates the causes and effects of disease, its onset, progress, and terminations. There is nothing, necessarily, in all this that suggests the means of cure. But since pathology has cleared the way, since it has defined and differentiated the many effects of similar causes, and the many causes of similar effects, the progress of the therapeutical art shows that the narrow limits within which a simple knowledge of pathology would confine the possibilities and the means of cure are being constantly enlarged by the independent experimental study of the action of remedial agents.

It is far from my intention, by these remarks, to underestimate the importance of pathology to the practical physician; I desire simply to state the logical relation of pathology to the healing art, and to insist that, though pathology is often essentially practical in its application, the art of therapeutics is itself becoming more and more scientific. If I were asked to name one of the most important contributions which pathology has made to therapeutics, I should say that it is what is known as the expectant treatment of disease; and while I believe that this has been productive of grave errors, and has retarded in many ways the progress of the art of healing, I am willing to admit that it has exposed many fallacies, dispelled many delusions, spared much needless suffering, and saved many lives.

Profoundly as the progress of therapeutics has been influenced by the advances in the science of disease, it is most important to bear in mind that the art of healing owes its greatest achievements to inductive methods no less than those of science. There is nothing, for example, in the pathology of small-pox which could possibly have led to the discovery that the modification of the disease produced by its transmission through the cow would so change the virus as to produce in the human subject a new disease, which would protect against the disease from which it was derived. Marvellous as the fruits of this discovery have already been in controlling the scourge which determined it, the principle which it established has proved to have a wider application and more pregnant consequences than the wildest imagination could have conceived when Jenner propounded it.

The discovery of anæsthesia really had its birth in the brain of a man who was not a physician. Sir Humphry Davy, in his observations on nitrous oxide, affirmed that as this "gas in its extensive operation seems capable of destroying physical pain, it may probably be used with advantage during surgical operations." Nearly fifty years afterward the principle suggested in this discovery of the anæsthetic properties of nitrous oxide found its application in the use of the ethereal derivatives of alcohol to paralyze temporarily the cerebro-spinal functions during surgical operations. But time would fail me were I to attempt to adduce all the examples which might be given to show how the art of healing grows through independent experimental methods of its own, and how pathology really, for the most part, furnishes the objects to therapeutics, and, so to speak, gives the terms of the problems which observation and experiment have to solve.

To apprehend clearly the principles upon which modern progress in therapeutics has been made, it is necessary to observe, first, that the aims of therapeutic effort are daily becoming more clearly defined. Many diseases which were formerly the object of assault by drugs, to which siege was regularly laid by a process of sapping and mining in which the patient often perished, have now been relegated to the realm of surgery. The surgical, in the sense of local, management of many of the tegumentary diseases, of the mucous membranes as well as of the skin, of cystitis, pyelitis, empyema, and even peritonitis, furnishes conspicuous examples of the substitution of local treatment for treatment by drugs. So large, indeed, is the number of diseases now treated by surgical procedures which were formerly subjected to general and more or less useless medication, that the domain of surgery is rapidly encroaching upon what has always been regarded as the special field of medicine. It is a curious commentary on the history of the medical art that what was once considered the *opprobrium medicorum* should have become the most advanced and scientific branch of the art of healing, for truly the stone which the builders refused has become the headstone in the corner. When we reflect that the lessons of antiseptic surgery have furnished the greatest impetus to the investigations of the germ-origin of disease and promise to revolutionize the principles of its prevention and cure, we can hardly overestimate the achievements, or exaggerate the possibilities, of the surgical art.

Another fact which is especially worthy of attention in estimating the changes which are taking place in therapeutics is, that the revelations in the etiology of disease and the more exact methods of diagnosis have exploded many of the old traditions, and only those survive which are substantiated by rational principles or by uniform success. Poly-pharmacy is following its victims to the grave, and the test of a sure aim and intelligent purpose is slowly but surely taking the place of random shots at imaginary foes.

In reviewing the many lines along which the art of therapeutics has advanced with the science of disease, we must be impressed especially with the greater objective precision of treatment in the management, first, of disorders of the nervous system; secondly, of the maladies due to parasitism; and thirdly, of the functional derangements of the processes of nutrition.

The discoveries in neuro-physiology have enabled the practical physician to differentiate the focal, systemic, and peripheral lesions of the nervous system, and to distinguish these from the functional affections. The practical benefits which are daily resulting from this essential preliminary step toward the substitution of exact for skirmishing methods of therapeutics are perhaps nowhere more striking than in the modern treatment of nervous maladies. Numerous examples might be adduced to justify this statement. A few will suffice. The early diagnosis of the meningeal irritation and pressure myelitis from caries of the vertebræ, and the timely application of mechanical treatment, not only prevent deformity but save many victims from the miseries of a helpless paralysis. Less conspicuous perhaps, but still impressive

when we contrast the present with the former consequences of the disease, is the considerable success which now attends the treatment of many cases of acute poliomyelitis. I hardly need refer to the striking results which are obtained in the treatment of the focal diseases of the nervous centres, of syphilitic origin. Much cannot yet be said in regard to the success of surgical effort in the treatment of the focal lesions of the brain, based upon the localization of sensory motor centres, but still enough has been accomplished to justify a reasonable faith in the possibilities of surgical relief in certain cases of cerebral hemorrhage, abscess, and tumor. The exploits of abdominal surgery have exceeded the most sanguine hopes; it is not impossible that the surgery of the cranial cavity will yield triumphs of equal magnitude. It is not to be expected that the systemic affections of the cerebro-spinal centres will ever be cured by the intervention of art, but there is good reason to believe that their progress may be more or less controlled by it. The slow development of such diseases as posterior and lateral sclerosis and progressive muscular atrophy, give abundant time and opportunity for experimental treatment, and it is not by any means unreasonable to predict that art may yet do something to modify or arrest the degenerative processes which constitute the determining cause of these affections.

It is hardly necessary to allude to the success which now attends the treatment of the peripheral lesions of the nervous system, both by surgical and medical procedures. In this division of nervous diseases the diagnosis of the sensory, motor, and trophic disturbances which proceed from the different forms of neuritis possesses the highest interest, and has proved most important in the determination of rational methods of treatment.

The management of the neuroses, which, for lack of more precise knowledge, are called functional, are of reflex origin, or presumably dependent upon variations in vascular supply, has reached a degree of precision and a measure of success which is most encouraging. Those which affect the intellectual and emotional centres, and which are now happily absolved from purely psychological theories of their origin, such as hysteria, hypochondriasis, melancholia, and the acute forms of dementia, have been brought within the range of rational treatment in a way to affect most favorably, in many cases, their prognosis and cure.

The affections of the higher motor centres, such as epilepsy, chorea, and the cardiac and respiratory neuroses, present conspicuous illustrations of the success of modern medicine in controlling, almost always, and in curing, often, these painful and distressing maladies.

It is interesting to note in the modern therapeusis of organic and functional nervous affections how largely it is based upon the direct local action of medicines upon special centres of innervation. The action of the bromides upon the medulla, of atropia and physostigma upon the respiratory centre, of digitalis and kindred drugs upon the cardiac ganglia, of cocaine and the nitrites upon the vaso-motor system, are familiar examples of the direct local influence of drugs upon the different specialized springs of nervous energy. The progress which has been made in cardio-vascular dynamics promises even greater results in the future than it has already attained, and is likely to give a precision to the application of remedial agents which will confer on medicine something of the exact scientific quality which belongs to surgery.

There is another department of neuro-therapeutics to which the limits of this discourse will permit only a brief allusion; I refer to the improved methods of treatment which have been brought about through our daily increasing knowledge of what are called reflex neuroses.

The application of the rational principle of all therapeutics, "Causa sublata, effectus tollitur," is often most successfully illustrated in the cure of many sensory motor derangements by the removal of the remote peripheral irritations which determine them. This recognition of the reflex origin of many morbid conditions has been so fruitful of valuable suggestions to therapeutics that, in our department at least, it is to be feared enthusiasm has carried its votaries beyond the bounds of warrantable induction. I allude to the surgical procedures which have been invented for the relief of the sensory, motor, and even psychic disturbances which the gynecologists affirm proceed from diseases of the sexual apparatus. It must be acknowledged that in the mind of candid observers there is more or less skepticism as to the correctness of the purely gynecological view of the origin of these neuroses, and consequently more or less opposition to the fantastic operations resorted to for their relief. Without calling in question the occasional brilliant results of oöphorectomy, even in cases where no visible disease has been demonstrated in the ablated organs, it is difficult to resist the suspicion that a very serious and unjustifiable mutilation is sometimes practised in cases of simple sexual hypochondriasis.

With this very incomplete sketch of the way in which modern scientific researches in the diseases of the nervous system have affected modern therapeutics, let us briefly consider the revolution which has taken place in the art of healing through the discoveries in the field of parasitism. Scarcely more than a quarter of a century ago our knowledge of parasitic diseases was confined to the morbific effects of the entozoa, the epizoa, and the epiphyta. Within this brief period most of the so-called zymotic diseases, and some which were not regarded as zymotic, have been traced to microzymes. The immediate and inevitable effect of these discoveries was to demonstrate the futility of much of the traditional treatment of zymotic affections, and to direct the attention of art to the possibilities of destroying or antagonizing these subtle and pestilent foes of the human organism. It is not possible for me to consider the present aspect of the germ theory in its relation to the many diseases to which it has been applied. It is sufficient to remark that it is continually invading the domain of pathology in new and unexpected directions. Not only all septic processes, but even inflammation itself; not only eruptive fevers, including syphilis, but even malarial and rheumatic fevers; not only phthisis and pneumonia, but even common colds; not only diphtheria, but ulcerative endocarditis; not only leprosy, but even the malignant infection tumors—all of these general and local affections have been more or less reasonably suspected of hiding the secret of their origin in a specific germ. Admitting that the microbic etiology of many diseases is as yet only a theory, it has surely given a new and definite aim to therapeutics, through which it has achieved in certain directions marvellous results. It has revolutionized the art of surgery by converting what were formerly regarded as most formidable operations into safe and simple procedures. It may be said to have conferred an almost dangerous facility upon certain surgical undertakings, and to have tempted the modern surgeon to enter upon paths which the angelic prudence of his predecessors made them fear to tread.

The problems, however, which the germ theory presents to the physician are more complicated and difficult to solve than those which it offers to the surgeon. Thus far it seems to afford promise of great results only in the direction of prophylaxis. To the sanitarian it is the revelation of a new gospel. It gives a pith to the principle of cleanliness, which commands a respect that has never been secured by its supposed contiguity to godliness. It has so formulated the protective measures against the spreading of infection in hospitals and private houses that it must in this way largely diminish the ravages of disease. But when we come to the object which the germ theory holds out to art, to antagonize the morbid processes which germs set up in the living body, either by destroying the germs or by neutral-

izing their effects, we are met by what seem to be insuperable difficulties.

If we consider the action of the remedies which have long been in common use in the treatment of what are now regarded as germ diseases, we find little to justify the explanation of their action on the theory that they are germ destroyers, and yet there is something suggestive in the effect of quinine in malarial fever, of mercury in syphilis, and of salicin in rheumatism, if this should prove to be a germ disease.

There are two directions in which the study of germ diseases seems likely to affect their preventive treatment. The first is prophylaxis by inoculation with a virus modified by attenuation or by passage through lower animals, and the second is a scientific investigation of the constitutional conditions which favor the growth of the various specific germs. Whatever doubt may exist as to the truth of Pasteur's deductions from his experiments in the inoculation of hydrophobia, there can be little question as to the protective results of inoculation in chicken-cholera and splenic fever. From what has already been accomplished in the saving of animal life in these diseases, and from the beneficent results of vaccination in controlling the ravages of small-pox, it seems quite within the range of possibility that similar effects may follow like efforts toward the prophylaxis of other diseases.

The investigation of the constitutional conditions which establish vulnerability to germ diseases seems to be a wellnigh hopeless problem; but when we reflect upon the daily observation of the variations in intensity in the infection fevers, in syphilis, and in the malignant neoplasms, if these should prove to be of germ origin, we cannot resist the hope that a scientific study of the causes which tend to produce a congenial soil for the development of the parasites which determine these diseases may yet lead to discoveries which will place other means of prophylaxis within our control.

The improvements which have been effected in the therapeutics of the disorders of nutrition through the scientific study of the processes of digestion are less conspicuous, perhaps, though they are really of wider practical beneficence, than those which have resulted from the discoveries in neuro-pathology and parasitism.

When we reflect how large a proportion of human ailments and the daily discomforts of life result directly or indirectly from vices of digestion, it is not surprising that the medical art should have been quick to appropriate the practical suggestions which scientific research has indicated in the physiology of nutrition. There is no good reason, perhaps, to suppose that the digestive organs of man are better adapted to the conversion of a greater variety of foods than those of the lower animals, but it is certain that his natural instincts, as well as his acquired habits, incline him to a larger variety in his diet. As a consequence he is doomed to more complicated disorders of his digestive processes, and from his higher nervous organization he suffers from them in very special and varied directions.

The investigations which have been made as to the nutritious value of all kinds of food-stuffs, of the relations of food to growth and to the evolution of different forms of vital energy, and especially the revelations of artificial digestion, have given an interest and importance to the subject of dietetics in the work of the practical physician which it would be impossible to exaggerate.

The improvement in the dietetic management of acute febrile diseases which has been effected through the introduction of partially digested foods has, without doubt, contributed very largely to their more successful treatment. The necessity imposed upon the physician, of "mending the watch while it is going," renders the question of feeding the sick one of primary importance. And there is perhaps no more useful improvement in practical medicine than the discovery of successful means of maintaining nutrition under the disturbing influence of disease.

In the special disorders of nutrition, such as lithæmia, gout, and diabetes, diet has come to play the essential part in their rational treatment. When we consider the manifold derangements of health which proceed from these disorders, the distressing cutaneous and mucous catarrhs, the joint-lesions, and the nervous disturbances, and reflect that, by attention to the diet alone, these affections may be largely controlled, we realize the magnitude of the obligation which art is under to the scientific investigation of the chemistry of digestion.

In this connection I cannot forbear to say a word in regard to what seems to me one of the most important changes in medical opinion and practice growing out of careful scientific observation of the effects of articles of diet in health and disease. I allude to the present aspect of professional judgment on the alcohol question. I believe I am speaking within bounds when I say that the majority of thoughtful physicians who have studied carefully the effects of what is regarded as the moderate, as well as the immoderate, use of alcoholic beverages are persuaded that as foods, excepting possibly in the febrile state, their value has been largely overestimated, and that in the normal condition of the body they are not only quite unnecessary to the maintenance of healthy nutrition, but are always more or less baneful in their effects. That they add, as Matthew Arnold has said, to the agreeableness of life, that their use is universal, that through their stimulating influence upon the nervous centres they have been potent factors in the progress of civilization, and that they are of inestimable value as stimulants and anæsthetics, are considerations entirely apart from the facts concerning them which are especially interesting, namely, their effects upon nutrition; that these are harmful and deteriorating to such a degree as to constitute the most powerful cause of physical degeneration at the present day, there can, I think, be no question. The drift of professional opinion in this country and in Europe is surely tending toward the restriction of their use as articles of diet, and simply for the reason that they are the determining cause of many functional derangements and structural degenerations.

In this brief and very imperfect sketch of the progress of modern therapeutics I have endeavored to give expression to two primary ideas involved in the principles upon which progress has been made: One is that the art of healing is to-day as empirical an art as it has ever been, but that with the advancing knowledge of disease the empiricism of therapeutics has become more scientific—it seeks more and more to assert itself, to establish its efforts upon a sure basis of reason. The other is that in modern therapeutics the application of remedial measures is made to operate more definitely upon the determining causes of disease. In the three special directions of diseases of the nervous system, of those due to parasitism, and of the disorders of nutrition I think that these two ideas are forcibly and successfully illustrated. The principles are of course not new, but they have hitherto had only limited and imperfect sway in the field of pure medicine. Now that an impulse has been given to them by the discoveries in the physiology of the nervous system and in organic chemistry, and especially by the experimental method of studying the action of remedial agents, they have become the basis of rational therapeutics and the foundation of our hope in its future growth. These principles constitute the basis of the great advances that have been made in the many special departments of medical practice, and whatever objections may be made to specialism in medicine, there can be no question that it has given an impetus to the art of healing, which the science of disease alone never could have afforded.

As I began this discourse with a tribute to the memory of three of our departed presidents, it seems appropriate that I should close it with an acknowledgment of our obligations to our present distinguished president and his predecessor for their effective and untiring efforts in elevating the character and in stimulating the growth and

development of this Academy. While the progress of the science and art of medicine all over the world has contributed to raise the standard of our profession, and to exalt its influence in society and in the state, it is impossible to overestimate what is being accomplished by such institutions as this Academy in crystallizing the energies and securing the co-operation of many minds in a common and exalted purpose.

To effect this we need, above all things, the directing intelligence of a wise and able executive. It has been the good fortune of the Academy during the past seven years to have its work organized and its destinies controlled by guides whose personal influence and professional distinction have infused a spirit of eager devotion to scientific work which must surely be fruitful of beneficent results. It is our part and duty to yield loyal service to the pilot whose hand is now upon the helm.

It is an auspicious sign of the times that the claims of scientific medicine upon the sympathy and confidence of the laity are daily being more distinctly and generously recognized. It is not very long since it would have been as vain in this community to call upon the public for financial aid in support of an institution of medical learning as to secure the means to teach Sanskrit in the common schools. Happily a new era has come, and men and women with wealth to spare, not only lend their ears, but they extend their hands in liberal response to the appeals of those who fitly represent the relations of scientific medicine to the most pressing needs of humanity. The public is beginning to comprehend that these relations have indeed become so manifold and so intimate that it would be difficult to name a single common human interest that is not more or less affected by them. Public education, the public health, the care of the poor, the criminal, and the insane, the regulation of social evils, and the adaptation of legislation to the many problems which confront us in the antagonisms of capital and labor—questions like these and many others involve in some of their aspects an appeal to principles which can only be evolved by the science of disease and the art of healing.

With such enlarged and varied demands upon the medical profession, it is easy to see that societies like this Academy are essential to organize labor in the many departments of the science and art of medicine, so as to encourage more thorough work and stimulate a higher ambition, to animate the younger men with the spirit of explorers, to test by free discussion and critical inquiry the merits of new discoveries and the accuracy of original observations—in a word, to unite earnest seekers after truth in a common effort to advance the standards of sound medical learning.

ALBUMINURIA IN CHILDREN'S DISEASES.—Dr. Alexandra Eckert states that she has made fifteen hundred analyses of urine in one hundred and four children, in order to study the changes occurring in this excretion under the influence of various affections attacking the child's organism, and to determine quantitatively the albuminoid losses sustained by the system in febrile albuminuria. The general conclusions reached by the author are given as follows: 1. All affections considerably disturbing nutrition of the child's system, and running their course in association with a high febrile state, give rise to albuminuria in an overwhelming majority of cases. 2. The characteristics of albuminuria are usually dependent upon the intensity of the morbid process, and the duration of the febrile period. 3. As a rule, albumen rapidly disappears after abatement or cessation of fever. 4. Non-febrile affections, as well as those accompanied only by slight fleeting febrile movements, seldom give rise to albuminuria of any considerable degree; and when they cause albuminuria, it occurs only as a phenomenon of very short duration.—*London Medical Record.*

FOLLICULAR AMYGDALITIS.[1]

BY A. JACOBI, M.D.,

PRESIDENT OF THE NEW YORK ACADEMY OF MEDICINE.

IN Nos. 17 and 18, 1886, of the *Berlin Clinical Weekly*, Professor B. Fraenkel published a paper, read before the Berlin Medical Society, on "Angina Lacunaris and Diphtheritica." In that essay he quoted several times a short paper of mine, which appeared in the *New York Medical Journal*,[2] of September 24, 1884, under the heading "Diphtheria Spread by Adults." Professor Fraenkel expresses himself as follows: "A. Jacobi asserts that diphtheria is spread by adults suffering from angina lacunaris. As this affection is a very frequent one, and as the patients suffering from it do not stay at home, Jacobi assumes that this affection, while not dangerous to the patients themselves, becomes an urgent danger to the community." Professor Fraenkel then adds: "I do not go so far." Still, he does go so far, for he reports the case of a girl aged twelve, who, while herself suffering from "angina lacunaris," infected her whole family with diphtheria. He then says: "Such cases, however, are so rare that I cannot agree with Jacobi in this, that the spreading of diphtheria is attributable to angina lacunaris. Still, there is a possibility that diphtheria may be spread through angina lacunaris, and, therefore, I deem it proper, as a measure of caution, to isolate cases of angina lacunaris."

These quotations have induced me to refer again to the subject of angina lacunaris, amygdalitis follicularis, "tonsillitis follicularis," and to propose the subject for your consideration. My reason for so doing is not the fact that my opinions and statements have been quoted rather incompletely or erroneously, but because it still appears necessary to fix the relation of follicular inflammation of the tonsils to tonsillar and general diphtheria beyond a doubt. I have tried to do so repeatedly, but have not been satisfied with the effect of my previous statements and deductions. What I desire to emphasize at once, however, is that I do not—as I am quoted—assert that diphtheria is spread by adults suffering from follicular amygdalitis. On the contrary, what I did say and do say is this, that what, in an individual case, was called by that name and then gave rise to diphtheria, was diphtheria, and, therefore, produced diphtheria. Nor do I say that every case of follicular affection of the tonsils is diphtheria, and that diphtheria in general is spread by follicular amygdalitis in general, but I claim that the name of follicular or lacunar amygdalitis is but a subterfuge for the lack of a correct or complete diagnosis. There are cases of follicular amygdalitis of a catarrhal, purulent, fibrinous, and diphtheritic character, and its name ought to be dropped from our nomenclature, because of its giving rise to mistakes, unless it be complemented with a descriptive adjective.

Professor Fraenkel makes the statement that he has changed his opinion on the relations between follicular amygdalitis and diphtheria since the year 1881. In that year (*Berlin. klin. W.*, No. 47) he published a paper in which he denied the possibility of the former ever being an infectious disease. His denial was based on the fact that an attack of follicular amygdalitis did not protect the patient, but, on the contrary, created a predisposition to relapses. He forgot that a first attack of acute rheumatism, or of erysipelas creates rather than annihilates a predisposition to relapses, and still both are counted among the infectious maladies. He says he forgot that circumstance. But he has forgotten more. He forgets that I have claimed, and do claim, that a previous attack of diphtheria predisposes to future attacks of the same kind, and, what is more important, that this observation and statement have been found to be correct by many other authors since. In regard to his changed views he refers to Friedreich as the first to count

[1] Read before the Section of Theory and Practice of Medicine, November 16, 1886.

[2] Not THE MEDICAL RECORD, as quoted by mistake.

certain cases of lacunar amygdalitis among the infectious diseases. This great author bases his position on the following observations:[1] Before there are any local symptoms there is *sometimes* a chill. The fever is *often* found to be higher than the local affection appears to justify. Further, the fever is *apt to* exhibit a cyclical curve. *Sometimes* Friedreich noticed a swelling of the spleen, and prostration and debility were *often* too marked for a merely local process.

I have known very long that certain diseases of the throat occurring during the prevalence of an epidemic of diphtheria—though they were not claimed as genuine diphtheria—belong to or are intimately related with this malady, and are, or can be, of an infectious character. Allow me to prove this assertion by quoting a few lines from my first papers on diphtheria which appeared in the American *Medical Times* of August 11 and 18, 1860, under the title "On Diphtheria and Diphtheritic Affections." There I say: "The register of the (German) dispensary shows, for January, 1860, the number of eighteen cases of membranous diphtheritis, and nine cases of affections considered by us to belong to the verge of, and caused by, the epidemic. While the records of our private patients, during the first week of January, gives out of the whole number of seventy-seven, sixteen cases of membranous diphtheria, and thirteen of the second class. This distinction has always been kept up by us. The diagnosis of diphtheria was never considered to be unimpeachable except in such cases as offered well-developed membrane. Among the second class of such diseases as were considered by us to be influenced or brought on by the epidemic genius, we have counted and put down stomatitis, pharyngitis, diphtheritic pharyngitis, cervical adenitis, and diphtheritic fever. Of the 2,577 patients of the children's class, during the last nineteen months, there were 200 cases of diphtheria and 185 of kindred diseases."

Permit me to make one more quotation from the same paper: "There is a form of the diphtheritic process in which very little or no fever is perceived, and little or no glandular swelling will take place. The congestion and swelling of the pharynx are not very marked, and the first remarkable appearance is noticed on the follicles of the nucous membrane of the pharynx. They are visible as whitish-gray spots of a twentieth or a twelfth of an inch in diameter. Not long after, however, membranes are formed, and the whole process will run its course in sometimes three or four days, without any great inconvenience to the patient. But there are cases in which the symptoms will increase in severity, fever will set in, and submaxillary and cervical adenitis take place. Such cases have been set apart by some authors as 'mild membranous angina,' 'herpes of the throat,' or 'herpetic angina.' We do not see anything else in these cases but mild diphtheria, mostly without pronounced general symptoms. We have not found any more reason to distinguish this form, of which, however, we have not seen more than a dozen cases, from diphtheria, than we should think of excluding a case of scarlet fever, without fever and with less than the usual eruption, from the record of cases of scarlatina. Moreover, we have pointed to the fact that such apparently simple cases will sometimes be followed by fever and adenitis; and when we add, further, that some of these mild cases of 'herpetic angina' have been followed by diphtheritic paralysis, we ought to lay aside our fondness for classification and subdivision. The clinical conditions of the diphtheritic process are variable in their appearance but alike in their innermost nature." These, Mr. Chairman, are quotations from a paper which I published twenty-six years ago.

The tonsil is a conglomerate of follicles, that means lymph-glands, of the simplest form. They are connected with, or rather separated from, each other by a network of cellular tissue, in the meshes of which colorless and nucleated lymph-cells and fine circular lymph-vessels are contained. The whole surface of the tonsil, composed (as it has been described) of follicles, is covered with a mucous membrane. Between it and the tonsil there is still a layer of parallel fibres of connective tissue. The mucous membrane has its own muciparous glands, and is covered with several layers of pavement epithelium. These epithelia, however, do not adjoin each other very closely; for, according to the researches of Th. Stoehr, there are interstices between them which permit round cells to escape between them. The surface of mucous membrane is not smooth or unbroken; it has depressions which Luschka called lacunæ, and Virchow, crypts. It is never the entire mass of a tonsil which is affected by a disease. Even malignant maladies start from single localities or tissues. There may be an affection of the superficial mucous membrane or of its epithelial covering, the subjacent connective tissue, or the dense connective tissue situated between the follicles composing the tonsil, or of these follicles themselves with their scanty lymph-ducts, and, finally, the cellular tissue in which the tonsil is imbedded. The character of the disease, whether more or less serious and troublesome, and the changes brought on by it, whether more or less persistent, depend on its nature, location, and extension. The superficial membrane with its lacunæ may be the seat of catarrhal, inflammatory, and diphtheritic processes. There may take place accumulations of mucus, pus, pus and fibrine, and diphtheritic membrane, and mixtures of several of them. In the course of time the mucous membrane itself will undergo changes. Occasionally its muciparous glands exhibit an inflammatory exudation or effusion, and ulceration following the rupture of the vesicles, particularly during a universal attack of follicular stomatitis of infants. Smaller or larger abscesses within the deeper tissue which perforate the surface, destroy part of the tissue and give rise to persistent sinuses, which are found empty or filled with mucus or pus, or pus with fibrine, or cretaceous material, found by E. Gruening to consist mainly of leptothrix and permit of the introduction of a probe to a depth of from one to two centimetres. The superficial indentations and depressions also may become deeper and assume a more irregular shape, sometimes in consequence of superficial processes, and partly of the breaking down of the deeper tissues. Thus we are not always in a position to determine whether we have to deal with a transformed lacuna or with an incomplete fistula resulting from the destruction of tissue. As a rule, the former are covered with epithelium, the latter are without it.

The lymph-vessels of the tonsils have remained very problematic for a long period. J. Harff wrote an inaugural dissertation in 1876, at Bonn, in which he treated of the anatomical and pathological structure of the tissue of the tonsil. In it he described the circular lymph-vessels, which, as mentioned before, surround the follicles and send very fine ring-shaped nets from within outward. Soon after Sappey published his exact observations in his "Anatomie descriptive," 3 ed., II., p. 892, 1876, and in his great "Atlas," 1882. Injections of the lymph-vessels of the lower surface of the soft palate reach the surface of the right and left tonsils in a newly born child, a fœtus, and an infant of from six to seven months. These injections, however, do not succeed in every instance. Whenever they were successful, they went rarely beyond the surrounding cellular tissue; exceptionally only into the follicles themselves. Besides this scanty lymph connection with the velum palati the tonsil has a similar one with the anterior and posterior pillars and the glands adjacent to the common carotid artery. It appears that C. Heitzmann's remark ("Microsc. Morphology," p. 592, 1883), that a large amount of lymph-tissue is stored up in the tonsils, is based on his own observations. These lymph-vessel connections are scanty, as it has been stated. With advancing age they become still more so. They are much less numerous in the adult. It is self

[1] Volkmann's series of clinical lectures, No. 75.

evident, besides, that each hyperplastic proliferation of the connective tissue, which is the direct result of most cases of local amygdalitis, compresses the small array of lymph-vessels and renders them atrophic. By the same process the surface undergoes changes, inasmuch as the normal mucous membrane and its epithelium are replaced by cicatricial tissue. That can be easily ascertained by the inspection of the throats of those who, while not affected possibly by an acute attack, have suffered from amygdalitis before.

Thus, tonsil and tonsil are not identical at all. When we study an acute attack, or a recent affection, we have always to bear in mind the changes which have been, or may have been, produced by previous diseases in the epithelial layers, in the mucous membrane with its muciparous follicles, and the lymph-vessels.

The surface of the tonsil may be affected, as stated before, with a catarrhal, fibrinous, purulent, or infectious inflammation. The first and the fourth varieties are most frequent at the present time. The first exhibits the usual symptoms of catarrh, viz., hyperæmia and hypersecretion. Actual catarrh of the tonsil produced by cold is not unilateral; it is accompanied with universal hyperæmia of the pharynx. Whenever there is an acute attack with *unilateral amygdalitis*, the latter *is the result of either trauma or infection.* The lacunæ of the surface are, as I said, often changed by previous disease. The new attack is particularly vigorous in their deep recesses, particularly when there are already fistulous diverticles. Then the mucous or purulent secretion is deposited in larger and tougher masses, it is viscid and cohesive, and resembles very much the contents of fistulæ originating from previous purulent inflammation of a part of the tonsil. The more the lacuna is fistulous, or the deeper the original fistula, the more local is the course of the whole process, the less the congestion, the more adhering and the dryer is the secretion. But it never forms a structure intimately adhering and cohering with the subjacent tissue. Occasionally a hard morsel of bread removes a part of the secretion, or a sponge, or a piece of absorbent cotton wrapped round a probe are sufficient to detach, or fetch from nooks the drops, or nodules, or membrane-like looking points. It is always easy to introduce a blunt probe into the recess of the lacuna or the fistula. This condition may exhibit an acute character, and last but a short time, or it may persist. In that case fibrin is frequently mixed with the purulent mucus. The drop, or nodule, is rapidly replaced by another one. Through weeks and years the same observation and the same procedure may be repeated. Each new attack *may* run its course with or without fever. Sometimes, but rarely indeed, there is some glandular swelling near the lower jaw. It depends less on the local affection, however, than on some accompanying universal pharyngitis or rhino-pharyngitis. Thus the catarrh of the tonsil, of the lacuna, may run an independent course, no matter whether acute, subacute, or chronic, and not attended with any complication. Still, it is self-evident, that some complication is possible, for a throat which is subject to catarrhal or inflammatory disposition offers less resistance to an existing epidemic of diphtheria. A much more frequent complication, however, is nasal catarrh of a subacute or chronic character. It is so frequent, that it is difficult in many cases to decide which of the two, rhinitis or amygdalitis with pharyngitis, was the original disease.

Another variety of disease, the visible elements of which are nodules, deposits of different consistency, either single or numerous, on either one or on both tonsils, is genuine diphtheria. Its deposit, though of small circumference or thickness, is membrane. While in some cases of catarrhal amygdalitis the deposits—being mucous—may change their very location by a change of position on the part of the patient, or are easily removed by brush or probe, in the diphtheritic form the dots do not change their place, they cannot be displaced without some effort, nor will a probe enter a cavity or fistula through them, or alongside. They are spherical or of irregular shape, whitish or whitish-gray; may be thrown off in from four to five or six days; or they get larger within a day; or a number of them become confluent and merge into a membrane. The space between them, or their neighborhood after confluence has been accomplished, may be pale or congested; fever and glandular swellings in the neighborhood absent or present. The more the morbid process is limited to the tonsils, the more frequently both fever and glandular affection of the neck are absent. But there are cases in which fever precedes the eruption; it may even increase during the presence of the first deposit, and until the completion of the membrane; and recede rapidly in many cases with a favorable result, with or without albuminuria. These severe cases are sometimes accompanied with a moderate amount of glandular tumefaction.

It does not appear difficult to estimate at their full value these cases of punctated diphtheria. But rarely large membranes rise from its basis at once; they are the result of many exudations melting into each other. This process of conglomeration being slow, or incomplete, we have a specimen of what is often called by the general name of follicular amygdalitis. The deposits may form from three different sources: either from the normal interstices of Stoehr, or from interstices formed by previous morbid processes, or directly from the pavement epithelium. It is particularly the persistence of the first which has been called diphtheritic angina, or angina lacunaris diphtheritica. It would be better to drop the name.

Albuminuria is not observed in catarrhal amygdalitis, unless there be a high degree of fever. As a rule, this happens only when there is a complication with intense inflammation, or even suppuration. Nor is albuminuria a frequent occurrence in unquestioned diphtheritic amygdalitis, either punctated or membranous, for the very simple reason that the organism does not participate, or participates but little, unless the amygdalitis is complicated. In uncomplicated amygdalitis, the surrounding cellular tissue being tense, and the lymph-vessel connection between the tonsils and the organism being insufficient, the transmission of the poison, from its original seat to the body, is prohibited. The obstacle is still more powerful when previous inflammations have resulted in hyperplastic proliferation. Thus the absence of albuminuria militates neither for the catarrhal nor the diphtheritic nature of the inflammation. Its presence is of some account only when its rising from other causes may be excluded; for nephritis is more frequent than many of us may suppose.

What about fever? Is its absence or presence of any value in the differential diagnosis of the catarrhal or diphtheritic form of amygdalitis? The simple and uncomplicated catarrh of the tonsil yields but few general symptoms, and but little elevation of temperature. However, general pharyngitis and phlegmonous amygdalitis look different. Thus, when there is much fever there is a complication.

The punctated diphtheritic amygdalitis, no matter whether it remains so or becomes membranous, need not be feverish. This fact is sufficiently explained by what I said of the anatomy of the tonsil. To expect fever only because a disease belongs to the class of infectious maladies is a (rather childlike) pathological postulation. Even grave sepsis is apt to run its full course with but little elevation of temperature, and the much boasted-of curves, which look quite picturesque in the books and are sometimes furnished by nature, shine too often by their absence. There are cases of diphtheria with high or little fever; fever in the beginning; fever in the advanced stage of the disease, because of more or less absorption of the poison either directly into the blood or through the lymph-vessels, and on account of rapid or slow elimination from the system.

Allow me, in connection with this statement, to return

to another one, which does not date from to-day, but which I have often verified and taught, and which will not lose by repetition. Surface diphtheria, without participation on the part of the lymph-vessels, is apt to exhibit no fever, or but little. There is no fever when the affected surface is not connected, or but little so, with the lymph system of the body. Such parts are, besides the tonsil, the vocal cords. Both are covered with pavement epithelium. Both have but little lymph communication with the neighborhood. What I said of uncomplicated diphtheritic amygdalitis is valid for diphtheria of the vocal cords also. A membranous croup without diphtheritic affection of other parts, or complication with a feverish disease, has no fever. Croup symptoms with high fever, but without complication, do not belong to the membranous form. Catarrhal laryngitis begins with fever. Even in cases of an existing punctated amygdalitis, when symptoms of croup make their appearance, the continuance of low temperature stamps the case as membranous; the appearance of high fever renders the catarrhal character more probable. It is not the place here to enumerate cases of which, however, I have seen many corroborative ones in the course of decades. But the subject is one of great importance both for diagnosis and prognosis and treatment. A single case may be mentioned here. On January 1, 1886, I diagnosticated membranous laryngeal stenosis in a boy aged eighteen months, because of the characteristic respiration and the absence of fever, there being no congestion, inflammation, or exudation in the throat. I had to perform tracheotomy a few hours after. Some membrane was expectorated through the tube on the third and fourth days. There was none in the fauces. On the third day, when the wound became slightly diphtheritic, there was an increase of temperature amounting to $\frac{1}{2}$° F. during a few hours. The tube was removed after a fortnight. The child remained well until he was taken with laryngeal stenosis and a high fever, four weeks afterward. He was attended by Dr. P——, who had assisted me in the operation and heard me speak of the differential diagnosis of these conditions. He diagnosticated the laryngitis as non-diphtheritic and proceeded accordingly. The child recovered in the usual way.

Fraenkel thinks he can diagnosticate some cases of diphtheritic and catarrhal amygdalitis by the absence or presence of peri-amygdalic abscesses. The presence of the latter, he claims, excludes diphtheria, because he has, so he says, never seen that combination. That reason is rather negative; his not having seen that complication will not prevent him from meeting it some day, and then he will publish another paper on the subject. I *have* seen the combination of diphtheria and abscess; it is not frequent, but it exists. There is no reason why it should not do so. For diphtheria, perhaps not even those cases excepted in which it enters through Stoehr's interstices, requires a mucous membrane previously affected. No admission to diphtheria through an intact integument. The previous catarrh and inflammation themselves may give rise to abscesses, while they also predispose to diphtheria.

It has been claimed by Fraenkel and others—for instance, by my learned friend, Dr. Holt—that there are so many differences between the course of angina lacunaris and diphtheria that the former is necessarily a special disease. Fraenkel could be right if diphtheria consented to run a typical course, exhibited albuminuria, high fever, paralysis in every instance, and turned out to be fatal in every case. That is, more or less, what has been claimed by some, and the practitioner or author who claims to have seen diphtheria recovering is gently accused of ignorance, or of falsifying his reports on account of ambition or greed. Nothing is more erroneous. Why diphtheria should be observed in the worst form only, when cholera, yellow fever, variola, and scarlatina are permitted to run a mild course oftener than merely occasionally, I cannot understand. If Fraenkel were less particular and less given to schematic differentiation, he would be less troubled about the cases of paralysis of the palate after his cases of alleged follicular amygdalitis. It is true that paralysis is so rare that, "he would fain believe that the case was one of diphtheritic catarrh." There are, however, besides the paralysis of the facial and trigeminus nerves, from intracranial causes, but two ways in which the soft palate can become paralyzed. It may occur in consequence of a general pharyngitis which results in serous effusion into the soft palate, and secondly by diphtheria—as a genuine diphtheritic paralysis. Whenever such a paralysis occurs after a punctated membranous amygdalitis, call it what you please, I call it diphtheria.

Such cases as are described by E. Wagner (in Jahrb. f. Kinderh., xxiii., p. 402), in which diphtheria was developed as late as three days after the commencement of an "angina lacunaris," are by no means rare. Cases in which, without fever, half a dozen or a dozen of punctated exudations merge into a membrane after a day or two are frequent. Most of you have also known of families in which one child died of membranous croup, another had nasal diphtheria and sepsis, another pharyngeal diphtheria, another "follicular," pointed, isolated deposits on a tonsil, or both tonsils, with various degrees of fever and constitutional ailment. Nor are the cases infrequent in which the good-natured and well-meaning practitioner diagnosticated a mere "follicular tonsillitis" an "angina lacunaris," and neither isolated nor disinfected, and the malady afterward, starting from the mild case, desolated the family. Whoever has seen that once must not forget it, and whoever has overlooked it once has enough self-reproach to bear to last a lifetime. Thus this "angina lacunaris" has not such an innocent look about it, "behind which," as Fraenkel says, "affections which are not diphtheritic may hide themselves," and in spite of which he advises to isolate the patient; on the contrary, in those cases in which the deposits are firmly attached, and are neither mucous nor purulent, they are diphtheritic, and are to be feared and treated as such.

In the paper published some years ago, and quoted before, I have shown that this variety of punctated diphtheria is mainly seen in adolescents and adults. This fact finds its explanation in my previous remarks on the gradual changes in the tonsillar tissue produced by repeated or chronic inflammations. For this reason the formation of large membranes, and serious constitutional affection, are not frequent among adults. In accordance with this observation is the other fact which has also been stated by Monti, that local and partial diphtheritic angina occurs mostly in bigger children who are inflicted with chronic pharyngitis and hypertrophic tonsils. Thus we can make the broad statement that pharyngitis produces the disposition to diphtheria and relapses in small children, and chronic pharyngitis of long standing suppresses this tendency in those of more advanced age and creates the disposition to localized punctated exudations. But whether membrane or point, the contagiousness of the disease is the very same. A mild variety begets that which is mild or severe, as the severe form may produce its like, or a mild variety. This mild variety is that from which adults are apt to suffer. It made me proclaim the warning that there is as much diphtheria out-of-doors as in-doors, as much out of bed as in bed. With this variety the adult is in the street, in business, in the school-room, in the railroad car, in the kitchen and nursery. With this variety parents, while complaining of slight throat trouble which is not heeded, kiss their children. It appears there is no escape from this mild, murderous variety. But wherever it is suspected it ought to be looked after; where it is seen it must be isolated and treated, less, perhaps, for the sake of those who are sick, than of those who are in serious danger of being infected.

THAT CHESTNUT AGAIN.—Dr. Smith says that no infant food has been found to adequately serve as a substitute for the breast-milk.

ON THE ABORTIVE TREATMENT OF PHLEGMON, ESPECIALLY OF THE FINGERS, BY RESORCIN INOCULATION.

By LUDWIG WEISS, M.D.,

ATTENDING PHYSICIAN, DEPARTMENT FOR SKIN DISEASES, GERMAN POLIKLINIK, NEW YORK.

Local therapy has from time immemorial played a most important rôle in the treatment of surgical diseases of the fingers, as has also internal medication. The alimentary canal in particular was not neglected, and the status biliosus et arthriticus was sought to be combated by purges, antimony, etc. The exposed position of the parts affected, and the extreme painfulness of the disease, were the causes which in times gone by led to those manifold methods of local treatment which tradition has handed down to us. These were mainly palliative, and intended to bring the swelling to a "head." Fried onions, bread masticated with salt and butter, honeyed dough; etc., have had, and still have, their firm adherents in the ranks of female wiseacres; fomentations, drawing plasters, rubefacients, epispastics, and resolvents still have their advocates.

With the deeper involvement of the tissues, however, producing subcutaneous paronychia, acute volar dactylitis, or even phalangeal osteitis, much more energetic measures must be promptly adopted if we would avoid the loss of a phalanx, perhaps even systemic infection or pandactylitis.

Phlegmons of the dorsum of the fingers, as is well known, are more apt to be diffuse, owing to the loose arrangement of the cellular tissue, and lymphangitic complications are comparatively rare here; while in volar dactylitis—by reason of the peculiar dense structure of the fibrous fasciculi of the connective tissue passing vertically down to the periosteum—there is manifested a great tendency to the extension of the inflammatory process down to the bone. The exudation is confined in the meshes of this unyielding fibrous tissue, and compression and necrobiosis result, causing the most agonizing pain. Phlegmonous forms are mostly of traumatic origin, following punctures or lacerations of the nail-fold or of the bed of the nail itself (hangnail). We must regard these very slight original lesions as the portals of entrance for the septic material, the absorption of which gives rise to very serious complications. These cases must be treated, in accordance with modern antiseptic surgery, by early incisions and thorough disinfection.

It will be evident from the foregoing that I am an advocate of the established methods of surgery. However, the large number of phlegmons of the fingers which presented themselves at my class for skin diseases at the German Poliklinik, at the time that I was experimenting with resorcin in other dermatonoses, prompted me to use the drug in these cases, and, as I believe with the most gratifying results.

Following the methods of Andeer,[1] in Munich, I had previously used resorcin *epidermically*, in the form of an ointment in furunculosis and lymphangitis,[2] with varying results. It happened that in those cases in which the necrotic plug was about to separate, the resorcin, applied to the denuded surface, hastened involution. I concluded that if it were possible to introduce resorcin into the centre of infection, not only would the noxa be destroyed locally, but by virtue of the rapid absorption of the drug in the lymphatics, the virus already there deposited might be rapidly destroyed, and, provided the treatment had been resorted to in time, surgical interference become unnecessary.

The opportunity for carrying out my experiments soon presented itself, and, as it happened, my very first patients were physicians, who, in the performance of their daily duties, had acquired some form of finger-phlegmons. The following records of cases will illustrate the method of treatment advocated:

Case I.—Dr. W——, an apparently healthy man, presented himself, March 18, 1886, for an intense phlegmonous inflammation of the nail-fold of his left thumb, due to a slight laceration and probable septic infection of the scarcely visible wound. This process extended to the pulp, and in twenty-four hours the ungual phalanx was swollen, reddened, tense, and painful, and the throbbing was very annoying. Resorcin inoculation was proposed, with the proviso that in case there was no amelioration in twenty-four hours a deep incision to relieve the tension be made. The inoculation was performed in the following manner: A number of shallow, parallel incisions, about one-fourth inch long, were made into and around the lesion, through the integument. Cocaine was used in twenty per cent. solution. The slight operation was scarcely felt by the paitent. A ten per cent. resorcin-lanoline salve was now applied, in a very thick layer, to the scarifications. The entire finger was then enveloped in a strip of lint, which in turn was thoroughly saturated with the salve; over this a layer of gutta-percha tissue, absorbent cotton, and a moist gauze bandage were applied in the order mentioned. The hand was then suspended in a sling and the finger dressed twice daily.

After twenty-four hours there was complete cessation of the pain, rendering a night's rest possible. The painful dragging along the flexor tendons had ceased entirely, as had also the annoying throbbing. The points of inoculation showed the peculiar effects of the resorcin: a whitish discoloration; the surrounding epidermis thrown into white rugæ, similar in appearance to the tips of the finger of a washerwoman. Twelve hours later the affected phalanx could be thoroughly examined, as if for fluctuation, without causing any pain whatever. The treatment was continued for three days, after the lapse of which the epidermis became discolored brownish-green, the points of scarification appearing leathery, and also brownish; and the nail showed a more yellowish-brown discoloration—all these changes being due to the deoxidizing power of the resorcin. The inflammation having subsided, boric ointment and a glove-finger for protection constituted the dressing.

Case II.—Dr. L——, a man in good health, punctured the tip of his left index-finger, close to the free border of the nail, with a surgical needle, while sewing up a lacerated perineum, on May 16, 1886. This slight injury, though somewhat painful, was overlooked. On the 17th considerable pain in the pulp; the next day pain became almost unbearable. Pulp tensely swollen, reddened, throbbing, with a dragging sensation in the flexor tendons; on the volar aspect of the radio-carpal articulation a bright red strip of lymphangitis, extending up to the elbow, was noticeable. Cubital and the axillary glands were swollen and painful. In this case I attempted treatment without inoculation, in order to satisfy myself as to whether the epidermic use alone of the drug might not be productive of equally good results. So the ointment was applied in a thick layer up to the axilla, and occlusive dressing as above described made use of. On the following day the symptoms were unabated; temperature, 101.5°. Owing to the intensity of the symptoms inoculation with the ten per cent. resorcin-lanoline ointment was at once resorted to; the scarifications in this case were made on the entire breadth of the tip, parallel to the long axis of the finger. Inunction of the rest of the finger, and of the entire flexor aspect of the forearm and arm up to the axilla, with the same ointment; the usual dressing was applied and the arm was suspended. The same night quiet sleep was possible; the next day the fever was absent, and pain was almost abolished; the lymphangitic redness was gradually fading. The following

rested. The same treatment was kept up for three more days, after which the characteristic discoloration of the epidermis and desquamation followed. Protective measures as in the first case.

CASE III.—Dr. R—— injured the tip of his left index-finger with a vulsellum hook while curetting the uterus post abortum. The fetid and decomposed portions of the placenta gave rise to primary infection of the wound. Twelve hours after this slight injury there was intense pain at the point of lesion, and the cubital glands were swollen and very painful; temperature, 101° F.; malaise rigors. The doctor, a firm believer in heroic procedures, subjected himself at once to the operation of excision and thorough *évidement*. Shortly after this, perhaps five days, the patient noticed on the anterior aspect of the lower part of the leg of the affected side a red metastatic spot, which soon increased to the size of a dollar, became swollen, painful, and hot to the touch, causing an erysipelatous swelling of the entire dorsum of the foot. The temperature was 101°, and the patient had a sallow look. There was a dragging sensation along the tibialis tendons, and the inguinal glands of the same side were swollen and painful. Resorcin inoculation, by means of the twenty per cent. ointment, was performed locally, and the flexor aspect of the leg and dorsum of the foot were anointed with the same salve. Typical dressing up to the knee. After twelve hours, fading of the erysipelatous redness was noticed, and pain and fever were absent. After twenty-four hours the inguinal glands were painless, and the patient could leave his bed; recovery ensued in three days.

The doctor expressed his confidence in the treatment, attributing his immunity from inguinal lymphadenitis entirely to the speedy absorption of the resorcin.

CASE IV. was that of a servant-girl in whom resorcin inoculation was impracticable, because the patient had been treated by a druggist until tendovaginitis and caries of the phalanx had set in.

CASE V. was that of another servant-girl in the same family. While cleansing silverware with a patent polish, she must have forced some of its poisonous ingredients into an abrasion of the nail-fold of the right middle finger; forewarned by the bad results of delayed treatment in the case of her fellow-servant, she applied to me in time. I found an extremely sensitive and swollen finger-pulp; there was a throbbing and dragging pain along the tendons, and the axillary glands were swollen and painful. Resorcin inoculation with the ten per cent. ointment and regular dressing brought about an almost immediate amelioration; after three days there was complete cessation of all the symptoms, without suppuration.

CASE VI.—A young lady endeavoring to remove a corn from the little toe made too deep an incision. Infection of the wound occurred; within twelve hours the incised toe was intensely inflamed, and the dorsum pedis, up to the ankle, was swollen and erysipelatous; pain in the inguinal glands was complained of. Temperature, 102°. Resorcin inoculation with a fifteen per cent. ointment was performed, and a dressing applied to above the ankle. Amelioration of all the symptoms took place within twelve hours, and in three days the patient could walk. As will be observed from the histories of these cases—to which numerous others could be added—the prompt arrest of the inflammation and infection was undoubtedly to be attributed to the action of the resorcin. Besides its antiseptic, caustic, and hæmostatic properties (Andeer), resorcin also has an antipyretic action (Brieger and Lichtheim); the latter, however, according to the investigations of Cattani, in Milan,[1] is exceedingly slight, and of not much importance. Its local action is very rapid, especially in genuine diphtheritic processes; the exudation under its influence soon becomes modified, and, undergoing fatty degeneration, is exfoliated. Its main triumphs, however, it obtains in erysipelatous skin affections, in acute, infectious, phlegmonous erysipelas, and in infected wounds. The advantages of resorcin compared to phenol, which in many cases would be indicated, are to be found in its minor degree of diffusibility and the consequent possibility of using it in more concentrated solutions or ointments without causing coagulation of albumen on denuded surfaces, and thus closing the avenues for its absorption; in its rapid absorption by the lymphatics without giving rise to dangerous intoxications, as may be the case with phenol, which is very diffusible; in its beneficial regenerating power on the epithelial structures of the skin, and its constringent effect on the capillaries. The absorption of resorcin manifests itself, according to the quantity absorbed, by a dark brown or olive-green discoloration of the urine.

Its absorption is not to be doubted if this discoloration of the urine is not present, either because the quantity necessary to effect a cure may have been small, or it may not have been used in the degree necessary to produce such discoloration. In either case, however, the marked disappearance of the symptoms for which the remedy was used will admit of no doubt as to its absorption.

Andeer, in 1884, described resorcin as the best means for an abortive treatment in the primary stages of infectious skin diseases and localized recent infections.[1] While he designates it as the most active in the form of an ointment, Cattani uses solutions of two to ten per cent. strength, and in serious cases applies cotton compresses saturated with the same solution. In opposition to Andeer's view, Cattani praises the hypodermatic use of the drug, because, as he claims, cellular inflammation does not arise more frequently from this than from other remedies similarly used.

Although the effect of resorcin in inflammatory skin diseases must be considered very active, I noticed that in wounds of the fingers, primarily or secondarily infected, and originating from minute solutions of continuity of the skin, its epidermic application was not efficacious enough to prevent infection and suppuration. The tardy absorption of the drug in these localities must be attributed to the characteristic dense connective-tissue structure of the finger-pulp, and to the compression to which the inflamed and engorged parts are subjected, making the lymph-capillaries impermeable, in spite of their abundant distribution and very numerous stomata. The callousness of the epidermis of the finger-tip also acts as a barrier to absorption.

In order to overcome these obstacles, and with the purpose of introducing the resorcin within the centre of infection, and there endeavoring to destroy the virus at the point of its entrance, and, finally, to facilitate the more rapid penetration of the resorcin into the lymph-capillaries, I concluded to break the skin, *i.e.*, by making minute solutions of continuity to scarify, and then to inoculate with the drug.

For the inoculation I found the salve form in a ten to thirty per cent. strength of resorcin the most serviceable, and, in order to facilitate its absorption in the non-scarified parts, I availed myself of the more easily absorbable lanolin.

This method, simple though it be, must be carried out strictly and carefully in order to be efficacious. It is of the highest importance to use a very fine, narrow-bladed bistoury, owing to the extreme sensitiveness of the finger-tip. In whatever situation the original lesion may be located the inoculation is performed in the area involved by the point of invasion. The small parallel incisions are longitudinal to the finger-axis, when made on the tip, and at right angles to it when on the nail-fold. In the bottom of each incision a slight bloody point is sometimes seen from an injured capillary, which is of no consequence; a hemorrhage, no matter how slight, is absolutely unnecessary and harmful. Cocainization by the application of absorbent cotton saturated with a ten to

[1] Monatshefte für pract. Dermatologie, Nos. 9 and 10, vol. iii., 1884, p. 277.

[1] Loc. cit.

twenty per cent. solution, according to the sensitiveness of the patient, may be performed, though many bear the little operation without any previous local anæsthesia. As a rule, a layer of thickened and callous epidermis will be found around the free border of the nail, into which the slight incisions can be made without inducing any pain worth speaking of. I have found that, no matter how carelessly this little operation might be performed, the inconvenience caused is so slight, compared to the benefits derived therefrom, that it ought never to be dispensed with in a given case. The next step is to abundantly apply the salve to the affected parts. I usually direct my patients to immerse the finger into the salve-pot, so that by directly impregnating the scarifications rapid absorption may result. A strip of lint is then closely wrapped around the affected finger, upon which, in turn, the salve is thickly applied, until it is thoroughly saturated with it. This forms a constant source of supply for the points of scarification, which supply is retained by application of the gutta-percha tissue. A layer of cotton and a moist gauze bandage complete the dressing. Rubbing in of the ointment is painful and unnecessary, since the dressing forces it mechanically into the scarifications.

It is sufficient to renew the impregnation twice daily, though as to this the subjective sensations of the patient are the best guide. The scarifications being sufficiently numerous to absorb the resorcin, an amelioration of the pain and tension is noticeable in from six to twelve hours.

One of the first requisites to the success of the treatment is its timely application. In the stage of erythematous redness, when the dorsal surface of the ungual phalanx or the nail-fold is reddened and glistening, when the patient first experiences pain, the inoculation of resorcin will almost positively abort the inflammation and prevent suppuration. The same favorable result is obtained in volar phalangitis also, provided the case presents itself before the exudation has exerted such a pressure on the dense vertical fasciculi of connective tissue as to cause necrobiosis and suppuration. When severe pain sets in in a circumscribed area of the finger-tip—which may appear turgescent, tense, reddened, and pulsating from the engorgement of its vessels, lymphangitis and lymphadenitis already commencing to show themselves, perhaps the finger being instinctively held in an elevated position—the process is still within the bounds of successful treatment by means of resorcin inoculation.

That the quick subsidence of the threatening symptoms in such a case is distinctly due to the inoculation and subsequent rapid absorption of resorcin, I believe to be beyond doubt. The application of the drug to the intact integument would not act promptly enough to prevent the rapid absorption of the infectious material. The introduction of the resorcin into the rete mucosum, or into the superficial layers of the cutis, as I advise it, must necessarily hasten its absorption and have a destructive effect on the infectious matter, since the drug is forced into the open mouths of the lymph- and blood-capillaries. Nevertheless, the epidermic use of resorcin along the track of the inflamed lymph-canals is of an importance not to be underrated, and should be made use of in every case in which lymphangitis exists.

To resume, resorcin used in the manner described will be accepted as an effective remedy in all furuncular and phlegmonous inflammations; it aborts the inflammation, if used in time, by destroying the germ locally as well as in the lymph-canals leading from the point of infection, at the same time acting as an anæsthetic on the terminal filaments of the sensitive nerves. This is accomplished in the surest way by the method of scarification and continuous impregnation.

126 Second Avenue.

THE PRINCIPLES OF WOUND DRAINAGE AND THE USE OF HARD RUBBER DRAINS.

By JOHN C. SCHAPPS, M.D.,

Associate Surgeon to St. Mary's General Hospital, Brooklyn, N. Y.

The importance of dryness as a condition of wound hygiene has had, during the last few years, an increasing recognition, as manifested by the number of recent dry dressings and implements for drainage. Of the former, perhaps, it may be true that perfection has been approached; but certainly not of the latter, since none of them has altogether supplanted the soft rubber tube, with all its imperfections.

The mechanical principles operating to drain a fresh wound may be considered, in their natural sequence, under the following heads:

I. The action of the tissues.

II. Gravity.

III. The action of the drain.

I. There are occasionally to be removed from a wound, by drainage, before its healing can be accomplished, such solids as particles of bone, and very commonly such semisolids as blood-clots, flocculi of lymph, and detached shreds of tissue. The function of the first or serous discharge from a wounded surface is, as regards these loose fragments, simply that of a vehicle for their removal. Should it not suffice, and, on the other hand, should they fail to secure vital union with the neighboring tissues, their disintegration is accomplished after a time by the formation of pus, and their expulsion is thus rendered more certain. All foreign bodies in a wound, whether derived from the tissues themselves or introduced from without, tend in a varying degree to increase fluxion into it. Certain kinds, whose surfaces are rough and mobile, have also the property of causing coagulation of the fibrin contained in the wound exudations. The clots thus formed, those already existing, and bits of soft tissue when present, retain in themselves fluid which frequently prevents their permanent adhesion to adjacent parts and makes them very liable to become necrosed before they can escape. The importance of promptly removing these substances, or, at least, of depriving them of their liquid, as a preventive of suppuration, is evident.

II. The current bearing the cast-off material is subject to (i.) its own *vis a tergo*, as fluid continues to be discharged from the tissues, to (ii.) the force of gravity, and possibly to (iii.) the capillary attraction caused by approximated surfaces. But the last-named force alone doubtless never retains enough fluid to prevent healing. The necessity of being guided by the law of gravity in determining the location and position of a drain needs no emphasis.

III. Regarded as a foreign body, it is evident that the merits of a drain are inversely as its activity in causing fluxion, coagulation and obstruction of the discharges, and mechanical injury to the tissues by pressure or friction. Drains may be divided, according to the principles upon which they act, into two distinct classes—capillary and tubular. The former obstruct the egress of everything except fluid, and, because of their fibrous surfaces, are probably active in bringing about coagulation and fluxion. They have, however, the compensative merit of an absorbent power, in draining off the liquid which renders prejudicial the presence of soft, moist substances. Such a drain, forming the extension of an absorbent dry dressing, may have large hygroscopic capacity. The dressing should, of course, be not merely a receptacle for discharges, but should have the power of absorbing from the drain, as the latter has of absorbing from the wound; otherwise the drain itself becomes saturated and a source of danger. Capillary drains are less completely dependent upon the force

retain, or to transmit. Its contents may be impelled by accessions of fluid discharged from the tissues, but the sole principle which is relied upon for its operation is the force of gravity. Aside from its passivity as a foreign body, the value of a capillary drain depends upon its activity in absorbing fluid, that of a tubular drain upon the opportunity it furnishes solids, semisolids, and liquids to pass into and through it. There is a class of drains, including both the open form, as those of decalcified bone, and the capillary, as those of catgut, which from the nature of their material have comparatively little potency in causing fluxion, coagulation, obstruction, or mechanical injury. By the imbibition of liquid a gradually increasing soft, gelatinous layer is formed upon their surface, thus protecting the tissues with which they come in contact, and preventing the formation and deposit of fibrinous clots. The soluble portion of these drains finally becomes transformed into a homogeneous liquid which may either escape or be absorbed. A small amount of basement structure, sufficiently organized to readily take up vital connection with adjacent parts, remains. A soft drain of this kind is less prejudicial to a wound than a clot or similar substance, because the latter cannot be liquefied except by a necrotic process, and, on the other hand, is not so highly organized, and therefore so ready to unite with the parts as is the structural base of an animal drain. The practical objection to these temporary affairs is their uncertainty. They may fail to maintain their existence long enough, or may be too slow in softening.

While it is unnecessary to discuss the advantages and disadvantages of each of the multitude of drains known to surgery, it is worthy of remark that the one probably in most general use—the soft rubber tube—has to a peculiar degree all unfavorable mechanical properties possible, except that of rigidity, which, by the by, is not always a disadvantage. Its surface is rough and its lateral openings are small, and usually angular. Their edges invite the coagulation of fibrin, and increasing deposits frequently obstruct the apertures and may even occlude the lumen of the tube. The presence of such a body, with its load of disintegrating material, is one of the most frequent causes of failure to secure primary union. It is an open question whether, under these circumstances, the admission of germs from without is a necessary factor in the production of suppuration.

With a view to meeting the indications touched upon, I would call the attention of the profession to the possibilities of hard rubber as a material for wound drains, and present as examples the forms shown in the accompanying cuts.

Fig. 1.

That represented in Fig. 1 is flexible. It consists of a thin tube, the convex surface of which is perforated by a single long aperture, rounded at each extremity, and winding spirally about the tube but terminating a short distance from each end of it. The area of this opening, which is narrower than would appear from the cut, is about one-fourth that of the convex surface of the tube, exclusive of those portions where the cylinder is entire. Close to each end of the drain, and near together, are two small holes. The instruments are smooth and polished without, within, and on the edges. They are made eight inches long, and of four diameters, one-fourth, five-sixteenths, three-eighths, and seven-sixteenths of an inch externally, and are known as Nos. 1, 2, 3, and 4 respectively. Each is intended to be divided into two drains, and is easily cut with knife or scissors, but it is better to soften the place where section is to be made. The flame of a match will suffice. The sharp edge made by cutting should be rounded with a fine emery cloth, and can be polished by means of crocus and oil. The makers, Messrs. Tiemann & Co., will furnish this instrument cut to any length and finished, and also that one shown in Fig. 2. By the use of hot water or dry heat one of these drains may be given a permanent curve corresponding to that of the wound, and by twisting it while soft the width of the spiral opening may be modified. The end of the drain where the circumference is unbroken is placed externally in the wound. The spiral opening is not continued to the end of the drain, because the skin is thus liable to drop into it, and obstruct the tube. The two small holes are for the insertion of a hare-lip pin, safety pin, a stitch, or other means of securing the instrument in place. In all tubular drains the best openings are at the ends. A drain should therefore be as short as it can safely be used and in a wound with two openings should not pass through it from one to the other, but two drains should be introduced. This is especially important when one opening is superior and is for the purpose of admitting irrigating fluid intended to reach all parts of the wound, and not merely to pass through the drains. The tube may be filled with catgut, horse-hair, or similar capillary material and the strands extended in all directions. They may be subsequently withdrawn, leaving the tube *in situ*, or may be left and the tube removed.

For this instrument the following merits are claimed: 1. As a foreign body it is comparatively harmless. The fact is well known that hard rubber pessaries cause much less vaginal secretion than those of soft rubber. Smooth, hard bodies, buried in the tissues, frequently become encysted, but soft substances usually give rise to abscess. It presents everywhere a polished surface; its aperture is the largest possible, with the smallest possible extent of edge; this edge is smooth, thin, and uninterrupted by angle, crevice, or sharp turn, with the exceptions of that at the end of the spiral opening and of the two small holes which are external to the wound. For these reasons it is not liable to cause coagulation, and the opportunity for coagula to adhere to and obstruct it is reduced to a minimum. Furthermore, by reason of its flexibility it cannot injure the tissues mechanically, except it be crowded into a situation where, by its mere presence, it interferes with the circulation. Its edges cannot sink into the soft parts, because of the width of the strip between them. 2. As it is unaffected by secretions or by chemical germicides it may be used again and again *ad infinitum*. 3. It cannot collapse. This property may prove valuable when considerable pressure by bandage is necessary to arrest oozing and prevent the formation of pockets. 4. From the thinness of its walls it is light, and has large capacity in proportion to its size. 5. Should granulations grow into it, its removal without injuring them is easily accomplished by a screw motion.

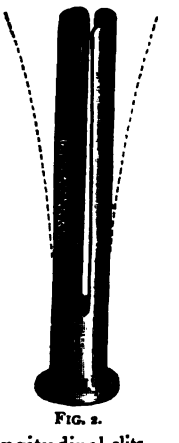

Fig. 2.

The instrument shown in Fig. 2 and which, for distinction, may be called an inflexible drain, consists simply of a thin, hard rubber tube, upon one end of which is a rounded flange, while from the other, two opposite slits extend nearly the whole length of the instrument. Should occasion require, the blades on either side of the slit may be fixed, by the use of hot water, at any degree of divergence. This drain, like the preceding, is everywhere rounded and polished, and its only crevices are at the ends of the longitudinal slits. It is placed in a wound so that its flange is external, and is also provided with two small holes for the purpose of fixing it. The blades are quite yielding in the direction indicated by the dotted lines. It is made in the following sizes: No. 1, diameter, one-fourth inch; length, one and one-half inch; No. 2, diameter, five-sixteenths of an inch; length, two inches; No. 3, diameter, three-eighths of an inch; length, two and one-half inches; No. 4, di-

ameter, seven-sixteenths of an inch; length, three inches.

Probably other forms will be devised in which this material will be found a useful one for wound drains. In hip-joint abscess it has been well borne, and is easy of removal and replacement in the form of a round or flattened tube without lateral openings. Though holes of any size and shape may be made in hard rubber tubing, it should always be borne in mind that any drain should be as free as possible from irregularities of surface.

486 Bedford Avenue, Brooklyn, N. Y.

Clinical Department.

FOREIGN BODIES IN THE INTESTINES.

Dr. Boardman Reed, of Atlantic City, N. J., writes: "Apropos of several cases of coin-swallowing recently reported in The Medical Record, I have to relate a case in which an irregular disjointed half of a sleeve-stud was swallowed by a four-year-old boy, and passed without injury. One month ago I was called to see a rather puny, delicate boy of four years, who had just swallowed part of a gold sleeve-stud. The corresponding part of the other stud was shown me. It consisted of a button-shaped disk nearly half an inch in diameter, with a small cylindrical stem projecting from it about one quarter of an inch. From this stem, again, there projected three little metallic points which could be pressed in, but were pushed out again by springs when the pressure was removed. It was altogether an ugly-looking instrument to expect to find its way through the human alimentary canal, and I had many misgivings about it. I ordered two teaspoonfuls of castor-oil, followed by plenty of mush and other coarse diet. The button passed safely in about thirty-six hours, without any pain having been complained of."

PERITONITIS FOLLOWING HERNIOTOMY TREATED BY IRRIGATION AND DRAINAGE OF THE ABDOMINAL CAVITY.

Dr. J. E. Summers, Jr., of Omaha, Neb., reports the following case:

Mrs. T——, a robust German, married, aged twenty-seven, entered the Child's Hospital, August 2d, for relief from a rather large femoral hernia on the right side, which she had had for three and one-half years, and which for five days had been irreducible. There were no symptoms of strangulation; only discomfort was complained of. As the woman was anxious to be cured of her infirmity, I operated on the third day after her admission, with the intention of relieving the constriction, and then doing an operation for the radical cure. The sac, on account of its thickened and inflamed condition, was with difficulty recognizable as such. It was opened, and a large piece of omentum, also inflamed, was cut off in the usual way, carbolized silk being used for ligation. No attempt at closing the canal being deemed advisable, the ring was dilated by a blunt instrument passed in along the inner border of the canal, internal to the sac, and upward traction made. (A conical urethral sound is sometimes advantageously used, as this was, in strangulated herniæ, instead of the knife.)

The sac was then cut short, and its circumference (the inner two-thirds) united with catgut to the edge of the femoral ring; the external segment was fixed by passing the needle through the tissues and skin covering it. A drainage-tube was introduced through the ring, the wound irrigated with a warm solution of bichloride of mercury, 1–1,000, and antiseptic dressings applied. Twenty-four hours after the operation a general peritonitis developed. solution was replaced by a one per cent. solution of carbolic acid, and the diarrhœa subsided. At times, when irrigating, the drainage-tube, more than ten inches in length, was replaced by a 22 F. nearly straight metal tube, passed well up into the abdominal cavity. Some fluid always remained behind, but it came away in the dressings, drainage being favored by position. At each irrigation pus and fibrin, in quantities sufficient to make a heavy cloud in the vessel, were removed. After irrigation there was always a noticeable fall of temperature and a better general condition of the patient. Dry cold by means of a Leiter's coil, morphine subcutaneously in quantities sufficient to control *all* pain, and a milk diet, constituted the rest of the treatment. The patient's convalescence was interrupted by a sharp attack of cellulitis on the left side, but this was soon brought under control by the use of long-continued hot-water irrigation of the vagina, and morphine subcutaneously. On the fourteenth day the temperature had reached the normal point; it had varied from 102° to 104° F. Shorter and smaller drainage tubes were gradually substituted, a change being made daily for four or five days, when they were withdrawn altogether; the wound contracted slowly, but is now completely healed. Whether the peritonitis was the result of a faulty antisepsis, or directly dependent upon the operative procedure, matters little. The interest in the case centres in the treatment, which in principle is the same as in those cases of suppurative peritonitis which have been treated by abdominal section and drainage.

THE CONSTITUTIONAL EFFECTS OF RHUS TOXICODENDRON.

Dr. Robert Hubbard, of Bridgeport, Conn., referring to the report of a case by Dr. White in a recent issue of The Medical Record, affirms his belief that the poison of rhus may produce constitutional effects. In support of this view he reports the following case: "Many years ago a healthy man, about thirty years of age, consulted me for a vesicular eruption, covering the whole body, without febrile disturbance, but attended with severe burning and itching; otherwise he was in perfect health. He said he consulted me because his regular attendant said he was suffering from scarlatina. The appearance of the eruption suggested ivy-poisoning, and I inquired if he had not been exposed to it; to which he replied confidently that he had not. On cross-questioning him closely I learned that his special work was lettering monuments and that he had, a few days before, been at work in Mountain Grove Cemetery, where the rhus toxicodendron is abundant. I suggested to him that possibly he had thus been incidentally poisoned. He, however, declared he had handled no shrubbery, except that he had pulled up a root of sarsaparilla, which also abounds there, and *ate it*. Doubtless he mistook a small specimen of the rhus, and hence, in my opinion, the result. The eruption differed from that produced by external application only in the size of the vesicles, which were smaller. I notice that many writers consider the eruption an eczema artificially produced, whereas I think the greater thickness of the envelopes of the vesicles and the greater delay in rupturing, distinguish it from vesicular eczema and place it more properly among the varieties of herpes.

Billroth would probably never have been the surgeon he is but for the influence of Langenbeck. The mantle has fallen with a double portion of his spirit. Langenbeck's pupil is not content to let power die with himself, as will be shown by the simple mention of a few of his former assistants and students—Menzel, of Trieste;

Progress of Medical Science.

GANGRENE OF BOTH LEGS IN A YOUNG GIRL, DUE TO ARTERITIS.—Dr. Briggs, writing in the *British Medical Journal*, reports the following case: G——, aged eighteen, first seen on August 17, 1882, had been suffering such severe pain in both legs and feet as to deprive her of all sleep and to reduce her to a state of collapse in the morning. The pain was evidently in the course of the femoral arteries and their branches; and pressure over them could not be tolerated. Both feet were cold and tallowy-looking, the toes already having a bluish appearance, and giving the impression of commencing gangrene. There was no cardiac disease. She had been out to tea the previous afternoon, and had been taken with the severe pain on returning home. Stimulants, abundance of nourishment, and opium were given, and she rallied. The gangrene, however, spread on the right side to Scarpa's triangle, and to the knee on the left, the pain along the course of the arteries being a most marked and distressing symptom. The toes were shrivelled and dried up; blebs, however, formed higher up the legs. Toward the end, a sharp attack of bronchitis, with a considerable rise of temperature, developed, and death resulted from exhaustion. She was always an extremely anæmic girl, and had been under treatment several times for anæmia. She had never had any serious illness. She died on September 12th. The father drank, and the mother was both nervous and anæmic. In the early part of the attack, while the legs were dark-looking, they were noticed one morning to have assumed a bright-red tint, but were quite cold; the patient declared, however, that she felt something running in them. The diagnosis of arteritis was based on the absence of any other cause and the presence of marked and severe pain along the course of the arteries, with tenderness, most acute on pressure. The bronchitis was looked upon as probably secondary to some embolic plugging.

PERFORATING INFLAMMATION OF THE VERMIFORM APPENDIX.—A study, based upon 257 cases of perforating appendicitis, has just been made by Dr. Reginald H. Fitz, and appears in the October number of the *American Journal of the Medical Sciences*. From their consideration it is apparent that perforating appendicitis is a disease most frequently occurring among healthy youths and young adults, especially males. Further, that attacks of indigestion and acts of violence, particularly from lifting, jumping, and falling, are exciting causes in one-fifth of the cases. A local cause is to be found in more than three-fifths of all cases in the retention in the appendix of more or less inspissated fæces, or in the presence there of a foreign body. The retention of fæces may be promoted by a constipated habit, but congenital or acquired irregularities in the position and attachments of the appendix frequently act as favoring causes. A fact in support of the last-mentioned statement is to be found in the frequency of successive attacks, one or more, of inflammation of the appendix. The inflammatory process once excited, its course and results show extreme variations; appendicitis may exist without giving rise to any characteristic symptoms, and often without a symptom of any distinct malady. Errors in diagnosis have been numerous, chiefly because the cardinal symptoms of localized pain, general heat, and circumscribed swelling have not been duly appreciated in their defined sequence. As to treatment, the first and last thought should be to keep the bowels quiet, together with absolute rest in bed, liquid diet in small quantities often repeated, and, above all, sufficient opium to neutralize pain. If, after the first twenty-four hours from the onset of the severe pain the peritonitis is evidently spreading and the condition of the patient is grave, the question should be entertained of an immediate operation for exposing the appendix and determining its condition with reference to its removal. If any good results are to arise from such treatment it must be applied early. If surgical interference is not instituted within the first twenty-four hours after the onset of the sudden and intense right iliac pain, to keep the bowels quiet must still be the injunction. The formation of the tumor, the circumscribing of the peritonitis, is then to be awaited. It is sure to form, in the large majority of cases, if the patient lives long enough. It is only in a small fraction that it occurs before the third day. In more than two-thirds of the cases the contents will escape externally or internally. Without surgical aid the escape is into the peritoneal cavity in most instances, with a rapidly fatal result. In a smaller number, the escape elsewhere not infrequently produces serious, if not fatal, sequels. Dr. Fitz concludes his elaborate study of the disease and its treatment with the following statements: The vital importance of the early recognition of perforating appendicitis is unmistakable. Its diagnosis, in most cases, is comparatively easy. Its eventual treatment by laparotomy is generally indispensable. Urgent symptoms demand immediate exposure of the perforated appendix, after recovery from the shock, and its treatment according to surgical principles. If delay seems warranted the resulting abscess, as a rule intraperitoneal, should be incised as soon as it becomes evident. This is usually on the third day after the appearance of the first characteristic symptom of the disease.

GELOSINE, A NEW BASE.—The Paris correspondent of the *British Medical Journal* says that, at a recent meeting of the Société de Thérapeutique, M. Guérin read a paper on gelosine, a mucilaginous substance extracted from a Japanese alga, which is sold in the form of dry whitish leaves. Gelosine is an excellent base, mixing easily with all pharmaceutical substances, soluble in alcohol and water, and in acidulated or alkaline water; it served as a medium for salts, powders, and different tinctures, and was of great utility in preparing suppositories. Gelosine gradually contracts and expels the water and medical substances it contains, which are thus spread over the surface of wounds or cavities, in which it is placed in any form. Gelosine thus gradually regains its original volume, but can be used more than once for the purposes cited above. Gelosine, therefore, appeared to be preferable to liniments and ointments. M. Guérin showed specimens of cylinders and slabs of gelosine containing camphor, creasote, sulphate of zinc, cocaine, tincture of belladonna, iodoform, corrosive sublimate, carbolic acid, and coal-tar. In order to use gelosine as a medium the quantity required should be immersed in its weight of hot water; the therapeutic agent is then added and incorporated. When the mixture becomes as thick as sirup, it is poured into moulds. These operations were completed in a quarter of an hour, and the expense was slight. Sterilized gelosine might be utilized in bacteriological research.

TAPPING THE UTERUS IN HYDRAMNIOS.—The *British Medical Journal* publishes the following contribution from its Paris correspondent: "An interesting case is now under the care of M. Tillaux. A woman, aged thirty-seven, apparently of a healthy temperament, was sent to the hospital. The patient believed she was pregnant; it was five months since she had menstruated. She had borne five children; two of these were twins, and had lived only twenty days. Delivery had always been easy, without any complications or sequelæ. Since the last delivery she was excessively susceptible to the influence of cold; when she was chilly the abdomen became swollen and painful. The enormous development it presented was rapidly attained; the diaphragm was pushed upward, and threatened the patient with asphyxia. It was difficult to ascertain whether the swelling was present previous to the disappearance of her period. The patient's answers to questions encouraged the belief that a tumor had existed longer than five or six months.

When M. Tillaux examined the tumor he ascertained that it was full of fluid. A few days after this first examination, on the left side and in front certain symptoms were observed which were opposed to the hypothesis of a unilocular cyst. Dropsy of the amnion was suggested, but not admitted. A few days later the patient was examined, and the signs were favorable to the belief of a unilocular cyst. The surface was equal and the resistance uniform. An operation was necessary, as the patient was almost suffocated and could neither eat nor sleep. She was tapped, and the fluid that escaped was clear, slightly yellow, and free from viscidity, which suggested that it was amniotic. M. Tillaux, while allowing the fluid to escape, kept his hand on the surface of the tumor, and felt it harden and contract like the uterus during parturition. The patient declared that she felt labor-pains at the onset. This enormous tumor, which contained at least twenty litres of fluid, was a uterus dilated at the fifth month of pregnancy by subacute hydramnios. M. Tillaux decided, in the interest of both mother and child, to diminish the quantity of amniotic fluid, but, nevertheless, to leave a sufficient amount in order that the infant should be surrounded by normal conditions. Seven litres were withdrawn; the patient was much relieved. Collodion was painted over the trocar wound. A hypodermatic injection of half a centigramme of morphine, and an injection containing laudanum, stopped the uterine contractions. The patient continued in a satisfactory state. A few weeks subsequently the patient left the hospital, and then felt uncertain about the fœtal movements."

Epitheliomatous Tumor of Cæcum. — M. Paul Blocq records a case of primary cancer of the cæcum, occurring in a male, aged fifty-one. Malignant disease primarily attacking this part of the intestines is rare, and this case is interesting from the fact that death resulted from perforation of the bowel in the neighborhood of the new-growth, producing fatal collapse, and not, as has happened in recorded cases of a similar nature, from obstruction. The patient had, fifteen months prior to seeking advice, complained of pain of a stabbing character in the right side. Shortly afterward, he could detect by the hand the presence of a small tumor, about the size of a walnut. He became rapidly emaciated, and had a cachectic look. He never evinced any special symptoms indicative of grave disturbance of the gastro-intestinal tract—no vomiting, no constipation, no diarrhœa. The tumor was not apparent to the eye, but was readily felt by palpation; it was painful to the touch, smooth, somewhat hard, and mobile. The patient died after having been under observation four months, or fifteen months after the development of distinct symptoms. At the autopsy a small, pedunculated, sloughing growth was detected close to and invading the ileo-cæcal valve, as also a small perforation in the wall of the gut, which had been the immediate cause of death. The greater part of the neoplasm, owing to putrefactive change, resisted the action of the stains for microscopic examination; those sections, however, which took up the coloring agents revealed the characters of a cylindrical epithelioma. There was no evidence of cancerous disease in any other organ of the body.

Insanity and Crime.—Dr. Richard J. Kinkead discusses at length the relation of crime to insanity, and controverts the views expressed by Lord Bramwell in a late number of *The Nineteenth Century*. The author believes that madmen who have committed criminal offences should be sent to an asylum. If an insane man commits homicide, he should be confined in an asylum for life; the protection of society demands this, not only to guard against a repetition of the act by the lunatic himself, but to prevent circulation of insanity by the confined in an asylum till cured. To punish a man for having a disease, or for the acts which his disease compels him to do, is unjust. To remove a madman to a place where his disease will be properly treated, and where he cannot injure others, is just, politic, and humane. Penal discipline is injurious to the insane; lunatics cannot be kept in prison; not only because it is detrimental to them, but because their presence is subversive of discipline, and a constant danger to the other prisoners and to the officers. Whether a man is mad or not can be decided only by those who have experience of insanity—that is, by experts. The law as it stands, Dr. Kinkead holds, is a wrong law; it tries to define what is indefinable, to create a disease which does not exist; it withdraws from the jury matter of fact, and establishes tests which experience has shown to be utterly fallacious. Lord Bramwell thinks it hard to say why lawyers, generally supposed sharp enough, should go wrong on this particular subject. The answer is simple: their education and training have not fitted them to deal with it. Versed in metaphysical lore and legal subtleties, they have not studied physiology or pathology, nor acquired experience of the insane; just as no amount of book learning alone will enable a physician to deal with sickness, or a surgeon to operate; so no mere mental philosophy or legal training will enable a lawyer to grapple with the paradoxes of insanity. If lawyers were obliged to spend six months in an asylum studying mental diseases, they too would be quite as anxious as doctors are that the law should be changed, and would be just as convinced that it is wrong, as Lord Bramwell is that it is right. Nor would they fall into the error of considering madness not a disease of the body; for whether we look upon mind as the product of the brain, or merely working through it, it is disease, functional or organic, of the organ, which is either its origin or instrument, that constitutes madness.—*The American Journal of the Medical Sciences*, October, 1886.

The New Ointment, Lanoline.—M. Doyon, in the *Annales de Dermatologie*, states that the new substance introduced by Liebreich, called lanoline, is rapidly absorbed by the skin. After being rubbed by lanoline, the skin appears firmer and more turgescent, and, at the same time, the surface is almost dry; while, with vaseline, it preserves a shiny appearance, even after energetic friction. This rapid absorption, which may be shown experimentally, seems to be due to the intimate connection existing between lanoline and the fat of the epithelium. Lanoline has been shown experimentally to have no injurious action upon healthy or unhealthy skin, but acts favorably on morbid phenomena occurring in the deep layers of the skin. Doyon has used ointments prepared with lanoline, instead of vaseline or glycerine, in four hundred cases of persons affected with cutaneous lesions, and has not found injurious effects in any one of them, not even in those cases where there was great irritability of the skin. In the case of a child suffering from impetiginous eczema of the skin of the head and face, the use of lanoline, containing salicylic acid at two per cent., produced cure. In cases of ulcerated impetigo, or of inflamed eczema, immediate benefit has been derived from the use of the following ointment: Salicylic acid, one part; lanoline, twenty-five parts; zinc oxide, starch, āā, twelve parts. In the case of a patient who had suffered for several years from a severe and rare form of pityriasis, three frictions of the following ointment sufficed to destroy the parasite: Salicylic acid, one part; precipitated sulphur, five parts; lanoline, fifty parts. In affections of the skin of the head, carbolic lanoline and sulphur suffice to remove furfuraceous desquamation. Doyon advises the addition of tincture of benzoine, in a rough state of the skin. His clinical

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THE IODIDES IN VALVULAR HEART DISEASE.

A PAPER of considerable interest, concerning the therapy of certain forms of heart disease, was read by Dr. Henri Huchard at the meeting of the French Association for the Advancement of Science, held in Nancy, in August last. The paper appears in the *Bulletin Général de Thérapeutique*, for October 15, 1886, and is supplementary to one on the treatment of angina pectoris, published in the same journal for September 30, 1885. In his first article, the author related a number of cases of angina pectoris treated very successfully with the iodides. In some of these cases there were valvular lesions in addition to disease of the coronary arteries, and the writer discovered that the iodide not only relieved the attacks of angina, but modified very favorably the valvular affection.

Of nine observations of this nature, the author reports four of the most conclusive. In the first, the patient, a man fifty years of age, suffered from atheroma of the arteries and chronic aortitis. There was also a double murmur heard over the aortic area. At the end of two years this murmur had entirely disappeared. In the second case, that of a man fifty-nine years old, there was dilatation of the aorta, and a diastolic murmur was audible at the base. After four years of continuous treatment the signs of aortic dilatation, and of valvular disease, had entirely disappeared. In the third case, an aortic regurgitant murmur became inaudible at the end of eighteen months, and in the fourth a diastolic murmur at the base became barely audible, and a systolic murmur at the apex disappeared entirely after treatment extended over two years.

Dr. Huchard affirms that the murmurs present in these cases were true organic murmurs, and in no instance functional. The patients were not anæmic; in every case there was fair compensation, and the heart was not dilated to any appreciable extent; there were no signs of asystolia, and the murmurs were constant, being heard at every examination for months, and disappearing only after years of uninterrupted treatment. It is certain also, he maintains, that the sounds were intracardial and were not caused by pericardial friction.

The medicament employed was the iodide of sodium, which is preferable in these cases to the corresponding potassium salt. The latter, when its employment is long continued, may affect injuriously the cardiac and renal functions, while the former is equally effective, more assimilable and less offensive. The drug is given in doses from five to fifteen grains three times a day, and the treatment should be continued, when possible, for from one to three years, with occasional interruptions of six or eight days in each month.

It is not claimed that the iodide treatment is efficacious in every form of valvular disease, but only in chronic, so-called sclerotic, inflammation of the endocardium. This is a very insidious affection which may attack the heart primarily, or may be due to an extension of the atheromatous process from the aorta. The process may invade the heart in several ways, attacking (1) the aorta alone, (2) the mitral and aortic valves, (3) the coronary arteries with or without simultaneous disease of the muscular tissue, or (4) the muscle and connective tissue alone of the heart (sclerotic myocarditis with or without granular degeneration). It is this condition that was present in the cases treated by the author.

Dr. Huchard is apparently not writing hastily and without a basis for his assertions of the efficacy of the iodides, for he says he has waited five years in order to speak with certitude of the results obtained. He has satisfied himself of the disappearance of the murmurs and of the permanence of the cure before publishing his observations. Not only did the abnormal sounds become inaudible, but the other objective and subjective symptoms of the atheromatous process were either greatly ameliorated or disappeared entirely.

SOME MODIFICATIONS IN BRAIN SURGERY.

MR. VICTOR HORSLEY'S contribution to the subject of "Brain Surgery," at the last meeting of the British Medical Association, contained a number of practical suggestions, as well as some radical departures from ordinary methods. Surgeons will do well to consult his article in detail. We can present here only the main features of his paper. Mr. Horsley describes the method of operating when portions of the brain-substance are to be incised or excised, but some of his methods can be adopted with advantage in ordinary operations for trephining.

The main points upon which he lays stress can perhaps be summed up as follows:

First. Strict antisepsis, including the use of the spray, is enjoined. The patient's head, on the day before the operation, is shaved, washed with soft soap, and then with ether. The portion to be operated upon is then covered with carbolized lint for twelve hours or more.

Second. A purgative is given on the day before the operation, and an enema on the day of the operation. Chloroform is used as an anæsthetic, as a rule, and just before anæsthetizing the patient he is given one-fourth of a grain of morphine. This allows a less amount of chloroform to be used, and it also contracts the cerebral capillaries and lessens hemorrhage.

Third. The incision in the scalp is not cruciform, but semi-lunar. It is carried directly to the periosteum, and its curve is to be directed so as not to cut large vessels, and so as to allow drainage when the patient lies on his back.

Fourth. A very large trephine is used, one of two inches in diameter. Or, two smaller openings may be made, and the intervening bone removed with a Hey's saw.

The dura mater is cut around four-fifths of the area exposed, and at a distance of one-eighth of an inch from the edge of the bone, so that it can be stitched into its place again. If the dura mater is intact, and can thus be replaced, the pieces of bone removed are placed between aseptic sponges, are cut in small pieces, and replaced at the end of the operation between the dura and the flap.

Fifth. The hemorrhage caused by incisions into the brain itself, can be controlled by plugging with small bits of sponge. The hot iron is not recommended.

Sixth. Wound cavities produced by the removal of brain are not to be drained for more than twenty-four hours. At the end of this time the drainage-tube is removed. The advantage of this plan is that the inflammatory exudation causes a pressure which is beneficial. If this exudation becomes too great, it can be lessened by opening up the tract of the drainage-tube with a probe.

THE EVIDENCE THAT A THOROUGH MEDICAL EDUCATION PAYS.

It would seem quite self-evident that it pays for the medical student to take a long and thorough course of study before starting upon his career. That he does not do so, however, is shown by the fact that only forty-one out of the one hundred and twenty-six medical colleges in the country exact three courses from their students. No doubt many young men would gladly avail themselves of fuller instruction, but the excuse is that their means forbid. For this class we think that sometimes too much charity has been shown, for certainly society does not excuse the inefficient engineer because he was too poor to get a good knowledge of his calling, nor does it pardon the railway company when accidents occur, for not having money enough to equip its road completely. Therefore the young man who is unable to give himself a thorough medical education, and, excusing himself on the ground of poverty, still starts out to learn upon his fellow creature that which he should have learned in a college, undertakes a very serious responsibility.

But, apart from this, it is now becoming a practical question, whether a young medical graduate can any longer earn his living, if he simply takes the old-fashioned two winter's course. The demands upon physicians for wide knowledge and technical skill have become much greater even in the past few years. And the young doctor must have some special claims for recognition if he would make his way.

An instructive illustration of this point is furnished by Dr. John H. Rauch in his last Report on Medical Education and Medical Colleges in the United States and Canada. He says: "During the past nine years I have followed up, with especial interest and care, the careers of 789 out of 1,000 physicians who studied four years and attended three terms before graduating. These are, with few exceptions, the successful and prominent members of the profession in the different communities in which they reside. They are well equipped by general education, by an ample period of professional study, by didactic and clinical instruction, and by hospital practice. They are successful, as a rule, because they have fitted

these facts, is shown by the gradual increase in the length of terms and number of the required courses The average length of the lecture term has increased from twenty-three and a half weeks in 1882, to nearly twenty-five weeks in 1886–87. The number of colleges requiring attendance on three or more courses of lectures has increased from twenty-two in 1882–83, to forty-one in 1886–87.

THE PREVENTION OF SCARLET FEVER.

SCARLET FEVER is a disease whose prevalence does not seem to be greatly affected by improvements in drainage, water-supply, or by better modes of living generally. This is shown by English statistics. For the last twenty-five years the annual mortality in all England from this disease has kept above 12,000. In London the mortality, until within the last two years, has been over 2,000. In New York City the mortality in 1871 was 791; in 1875 it was 514; in 1883 it was 744; and in 1885, 559.

It is only by isolation and disinfection, therefore, that this disease can at present be checked; but there is already considerable evidence that such measures are helpful.

Thus, in London, in the last two years, since more efficient means have been adopted for isolation, the mortality rate has fallen to 700 in 1884–5, while for the present year it has been only at the rate of about 400.

At Salford, England, according to Mr. John Gatham, the annual death-rate from scarlet fever used to be about 135 per 100,000 of the population. Since the establishment of a fever-hospital, and the passing of a compulsory notification act, the mortality has been only about 50 per 100,000.

It thus appears that by means of isolation, by the establishment of fever-hospitals with the enactment of a proper compulsory notification law, scarlet fever can be reduced in amount about one-third. And this seems to be the only way at present by which we can seriously affect the prevalence of the disease.

It may be said that in New York we have both these things, and yet no marked effect is produced. To this the answer is that New York, owing to its crowded population, is under peculiarly unfavorable circumstances; and again, it is by no means certain that we may not claim a diminution in the prevalence of the malady; for our population has increased 300,000, while the scarlet-fever mortality has not increased, the annual average being, perhaps, even less than it was a decade ago.

THE NEW SURGEON-GENERAL OF THE ARMY.

LIEUTENANT-COLONEL JOHN MOORE, Surgeon and Assistant Medical Purveyor, has been appointed by President Cleveland Surgeon-General of the Army, *vice* Surgeon-General Robert Murray, retired.

General Moore has proved himself an efficient officer in every arm of the service, has an honorable war record, is a trained soldier, a thoroughly competent surgeon, and one who will bring to the duties of his new office a ripe

News of the Week.

MONUMENT TO DR. BENJAMIN RUSH.—The effort to secure funds for erecting a monument to Dr. Benjamin Rush is being actively carried forward by the committee in charge. The member for New York State is Dr. A. N. Bell. It has been decided that $40,000 can be raised by one-dollar subscriptions, and contributions of this amount are solicited from every doctor in the country. Payments can be made to Dr. Bell or to the Treasurer, Dr. J. M. Toner, of Washington, D. C.

HOSPITAL SUNDAY.—The work of arranging for the annual week of contributing to the hospitals of New York City has begun. It is expected that over $50,000 will be obtained this year. Last year the sum was $46,085.

THE LEGACY OF A MILLION.—Lady Wilson, the widow of Sir Erasmus Wilson, died recently. The Royal College of Surgeons now becomes entitled to the legacy of $1,000,000 left by Sir Erasmus.

DR. DANIEL G. BRINTON, of Philadelphia, has been elected Professor of American Linguistics and Archæology in the University of Pennsylvania. Dr. Brinton has been for several years Professor of Ethnology and Archæology in the Academy of Natural Sciences of Philadelphia. He is the author of numerous works and essays on these branches, and has edited a series of works in the native American languages, under the title "Library of Aboriginal American Literature," six volumes of which have already appeared. We congratulate Dr. Brinton upon the well-deserved honor which he has just received.

DEATH OF DR. JOSEPH G. RICHARDSON.—Dr. Joseph G. Richardson, Professor of Hygiene in the University of Pennsylvania, and a member of the Board of Health, died very suddenly of apoplexy, at his home, November 13th. He was fifty years old at the time of his death.

M. PAUL BERT, the well-known physiologist and politician, died on November 11th.

THE OFFICE THIEF AROUND AGAIN.—Now is the time for overcoats to be hung in the hall, and for the office thief to take them. Look out for the pretended patient who calls at odd hours and wishes to wait for the doctor.

THE NEW JERSEY SANITARY ASSOCIATION held its twelfth annual meeting at Trenton, on November 19th and 20th. This association now numbers three hundred members.

THE LATE WILLIAM H. DUDLEY, M.D.—The late William H. Dudley, M.D., while travelling in Europe, in 1857, conceived the idea of establishing in this country a medical college in conjunction with a hospital, where students might have the advantages of medical and surgical instruction at the bedside of the patient. On his return he communicated his plan to a small number of friends, who, at a meeting held in October, 1857, at the rooms of the German Dispensary, 147 Court Street, Brooklyn, agreed to organize. At a subsequent meeting committees were appointed to effect the organization of such an institution, under the name of the St. John's Hospital, and to obtain a charter from the Legislature. In March, 1858, it was agreed to change the name to that of the Long Island College Hospital, under which charter was obtained and the institution was incorporated. The hospital work was begun in November, 1857, at the rooms of the German Dispensary. That place soon proved inadequate, and in February, 1858, the present property in Henry Street was purchased. To this place the hospital was removed in the following spring.

No adequate aid being furnished by the public, the work of the hospital only was continued till October, 1859, when a meeting of the regents was called to consider plans for organizing a medical college. The council then consisting of Drs. Dudley, C. L. Mitchell, Thomas Mason, and John Byrne, submitted a plan which was adopted. But the regents, in view of their pecuniary inability to meet expenses, declined to open the school when Drs. Dudley, Mitchell, and Mason offered to guarantee the annual expenses of the school to the extent of $3,000, if the regents would open the teaching department. This offer they declined, fearing that the debt of the institution would prevent permanent success. Finally the affairs of the institution came to a crisis, and the property was sold to Dr. Dudley for $28,550, including a mortgage of $20,000, which he assumed.

In this way the doctor's object of saving the institution from destruction was accomplished. Then Drs. Dudley, Mitchell, and Mason, courageous and faithful friends of medical education, offered the Regents to assume all the liabilities of the school for the first term. The offer was accepted, and the opening lecture was delivered on March 29, 1860. When the term closed, these gentlemen offered to assume the liabilities of the school also for the future. The acceptance of this offer made it possible to continue the collegiate department, for the embarrassments of the institution were still so great that the Regents could not afford to aid the medical school. These embarrassments culminated in October, 1861, when the president and secretary of the institution, despairing of success, resigned. If others despaired through these discouraging years, Dr. Dudley was hopeful. Difficulties seemed to inspire him with new courage and determination to make the institution succeed. It was undoubtedly his courage and determination that gave hope to others, who, but for him, would have abandoned the enterprise. His colleagues in the council were also brave and faithful, and bore their shares of the burden. And there were Regents who would not abandon the institution, and who contributed of their own means, and secured the aid of personal friends to make it succeed. At last, on February 16, 1865, after an uncertain existence of many years, a committee appointed to raise money to relieve the institution, reported the receipt of $22,800, including Dr. Dudley's subscription for a large sum. The mortgage of $20,000 and other debts were then paid, and the title of the property retransferred by Dr. Dudley to the corporation of the Long Island College Hospital. In 1866 Dr. Dudley was elected a member of the Board of Regents; he was a Regent from that time till his death. He had the satisfaction of seeing the institution, which he had thus originated, fostered, and sustained, and of which in the long, dark days of its adversity he had never despaired, flourish and grow strong, an honor to the country, his profession, and himself, and with

which his name should ever be gratefully associated During the last years of his life he was the president of the college, in which position the wisdom of his advice and the fruition of his work were more and more manifest. This memorial inadequately represents the difficulties encountered by him and his co-workers, both physicians and laymen. Let it be said that he never faltered in his duty to this institution, to which his time, his money, and his best efforts were always freely given, in an unassuming, but most liberal and persistent, manner. The final success is his best and most enduring monument.

In the death of Dr. Dudley the Regents have lost a very dear friend and associate, whose place it will be most difficult to fill. The Regents feel that they cannot do less than place upon their record this brief memorial of his services and of their personal respect and regard.

By order of the Board of Regents of the Long Island College Hospital. THOS. H. RODMAN, *President.*
W. J. OSBORNE, *Secretary.*

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual and Stated Meeting, November 22, 1886.

THE adjourned annual meeting was called to order by DR. DANIEL LEWIS, President.

DR. JOHN C. PETERS made a supplementary

REPORT FROM THE COMMITTEE ON HYGIENE,

with special reference to *stable manure* and *manure-yards* in this city. The Committee advised "that a petition be sent from the Society to the Health Board and other authorities, recommending the passage of an ordinance abolishing the sidewalk manure-pits entirely within one or two years."

The recommendation of the Committee was adopted.

The recommendation of the Treasurer, that the Comitia Minora be authorized to investigate

THE ARREARS IN DUES

of all honorable members whose present circumstances are such as to embarrass them in paying the tax, and to remit the same, was adopted; as also was the recommendation that the Comitia be instructed to report to the Society for expulsion the names of those who can, but will not pay their dues.

The Society then listened to

THE ADDRESS OF THE RETIRING PRESIDENT,

who referred to the intimate relations existing between the New York Academy of Medicine and the County Medical Society, and yet duties devolved upon the latter such as no other medical organization of this city can ever assume. After referring to the importance of becoming members of the medical body politic as here represented, he gave a brief reference to the membership, and then spoke of the scientific work done during the last two years. Reference was then made to the relation existing between the specialist and the general practitioner, and it was said of the latter that if he failed to use the opportunities offered, he will naturally become the servile lackey of the specialist, a position of little profit and doubtful honor. Special reference was made to the long list of members who had been stricken from the roll by the hand of death, which included the young and the aged, and those with brilliant prospects as well

honor which it had bestowed upon him, Dr. Lewis introduced his successor in office, DR. LAURENCE JOHNSON.

The Society then listened to

THE INAUGURAL ADDRESS

of its new President on taking the chair. After expressing his thanks for the high honor conferred upon him, coupled with the promise to discharge the duties of the office to the best of his ability, he directed attention to what he thought should be the policy that the Society should pursue during the ensuing year.

The Society owed first a duty to the people, next a duty to the science and art of medicine, and lastly a duty to itself, its individual membership.

Duty to the people included dissemination of the knowledge of sanitation and preventive medicine, and other matters of public importance, and the discouraging, in every way possible, the abuse of medical charity. The best way to cure the poor of the abuse of this charity was to charge them only what they could afford to pay. From time immemorial it had been the policy of the profession to consider a fee as an honorarium and acknowledgment of services rendered, but not strictly a compensation. If the subject was placed on this basis in our dealing with the poor of New York, then we could sweep away in an instant our false pride in the matter of accepting small fees, and give due weight even to "the widow's mite." This should apply with special force to our younger specialists.

The duty of the Society to the science and art of medicine reached every individual member, and required of him an endeavor to advance, by personal study and observation, the science, and in his practice to exemplify the art.

Reference was then made to the extreme form of specialism in medicine, which threatened the Society with serious danger, and which relegated papers on diseases of the eye to the audience of ophthalmologists, of the ovary to the gynecologists, of the brain to the neurologist, etc. There was a form of specialism which was legitimate, but it was not of the character of the above.

Lastly, the President referred to the duty which the Society owes to its membership, including the legal obligations.

At the close of the address, the President appointed the

COMMITTEES FOR THE ENSUING YEAR.

Committee on Ethics.—Dr. E. Darwin Hudson, Jr., Chairman; Drs. Charles E. Hackley, Alexander S. Hunter, E. A. Maxwell, and Edwin F. Ward.

Committee on Hygiene.—Dr. Alexander Hadden, Chairman; Drs. John C. Peters, Cyrus Edson, D. B. St. John Roosa, and John H. Billings.

Committee on Prize Essays.—Dr. Joseph D. Bryant, Chairman; Drs. A. B. Judson and F. A. Castle.

Auditing Committee.—Drs. P. A. Morrow and H. G. Piffard.

The *Committee on Ethics* recommended the discipline, and the *Comitia Minora* recommended, as the kind of discipline,

THE EXPULSION OF DR. JAMES O'REILLY.

The recommendation of the Comitia, after hearing the case, was adopted unanimously.

The *Comitia Minora* recommended the adoption of a resolution providing for the publication of

THE MEDICAL DIRECTORY

for another year, to be edited by the Comitia, and the recommendation was adopted.

DR. JOSEPH D. BRYANT then read a memoir of

GASPAR GRISWOLD, M.D., M.R.C.S.,

in which he paid a worthy tribute to the memory of the deceased.

The reading of Dr. De Garmo's paper on "The Treatment of Hernia by Subcutaneous Injection" was post-

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 18, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE ANNIVERSARY DISCOURSE.

THE occasion was the delivery of the Anniversary Discourse. The audience was large and distinguished, including many ladies, and several gentlemen eminent in the liberal professions.

The President, DR. A. JACOBI, spoke as follows:

The New York Academy of Medicine is of about the same age as modern medicine, as anæsthesia in America, and as Virchow's *Archiv*, and his cellular pathology in Germany. During these forty years scientific medicine has progressed all over the globe in steady evolution. This Academy has not only followed this progress, but has contributed to it very largely. Of this assertion its historian would find many and irrefutable proofs. Indeed, very many of the names connected with the Academy would be bright lights in any country's literature; to mention them here, however, would call the blush of pride to many a modest man's cheek, for there is many a Fellow in this hall, at this moment, who is both admired in our country and blessed in foreign parts, for his contributions to the science and art of medicine.

Still, justice requires me to say that the Academy owes its position and efficiency to more than the efforts and genius of its best and most powerful minds alone. The political and the scientific republic thrive on the co-operation of the great capacities and the democratic masses. The biweekly stated meetings, with their papers and discussions, have kept the interest in scientific pursuits awake, more or less, all these decades; the vigorous life of the newly established sections proves the zeal of the many participants; the rapid increase of the library, which is accessible to both the whole profession and the public, speaks as well for the Academy's success as for its generosity; the absence of ethical codes from the requirements of admission, and of ethical wranglings from its gatherings, for its scientific spirit; and the unencumbered possession of this large building, for the Academy's perpetuity and lasting influence. In its name, I am directed to extend to all of you a hearty welcome to this hall. Still, while so doing I cannot abstain from expressing the hope that my successor may, in the near future, have the honor of receiving you in a larger hall, and one more worthy of being the centre of the profession of this metropolitan commonwealth, and the representative of American medicine.

American medicine has always exhibited a peculiar feature, mostly in common with the rest of the Anglo-Saxons on the other side of the Atlantic. It is eminently practical. In this I do not wish to be misunderstood. Science need not have, *ea ipsa*, an exclusively practical aim; its value is not its weight in bread or butter. Mental efforts must not always be directly changeable into coin. The very branches of philosophical and exact sciences which have contributed most to increase the growth of human powers, carry their reward less in money than in their intellectual results.

Indeed, for a long time American medicine has suffered from the very fact that we had no class of men who studied for study's sake, and found their aims reached in the cultivation of pure science. We had no institutions to aid them, no citizens—though they would have fain done so—rich enough and interested enough to endow the institutions, no scientific men independent enough to allow themselves to be absorbed in their intellectual labors. All this is being changed. The number of strictly scientific workers among us is still small, but it is increasing constantly, and the men and women outside of the profession who are interested in, and willing and anxious to aid, the cultivation of medical science begin to make themselves known. The American family who but lately enriched a medical school and thus, let us hope, rendered the prospects for a vast improvement in medical teaching and an elevated standard of professional merit more promising than ever; the large bequest to this Academy due within a few months, by a lady connected with one of the most illustrious medical families of the city; the munificent donation, a few weeks ago, by another lady who desired to lend an expression of her husband's and her own admiration for medical science and the medical profession—all of them prove the interest the public is beginning to take in medicine and medical progress.

Well it may, for if there be a science, or a complex of sciences, pure and at the same time practical, it is medicine. The medical professions of all countries, and medical science in every land, have but one aim and end—that is, the preservation of the health of the commonwealth and the individual, and the saving of life. The very results of the most abstruse investigations, the very highest intellectual efforts, are always directed to the accomplishment of these practical ends.

If there were no other tie between the public and the profession, there it is. Its existence is proven by the interest you have exhibited and the readiness with which you have kindly yielded to our invitation. As for the profession, it has felt it always; certainly, since the time when its adepts ceased to wear wigs wherewith to cover the occasional emptiness of heads, and discarded the gold-headed canes from which the oracularly sealed lips liked to suck wisdom, the thoughtful and progressive professional man has always understood his connection with, and his responsibility to, the community, and known this also, that the more intimate the public became with the foundations and tendencies of his science—not to be gathered, however, from the cheap publications and advertising sheets which they steal into your houses, or sell to you in the garb of a religious or secular newspaper—the easier and more successful was his own task, viz., to protect or save his individual charge, and to benefit the community at large. In this spirit, dictated by the feeling, more or less conscious, of the existence of interests common to the public and the profession, once, nearly thirty years ago, an Anniversary Discourse was delivered to which the public was invited. What at that time appeared to be merely desirable, has at present become a necessity. The revised constitution of the Academy ordains that the Anniversary Discourse must be delivered in November of each year, and must be public. To me personally, it is a source of intense gratification that the new rule should be inaugurated during my presidency. Thus was granted to me what I hardly had the courage ever to hope, to witness the realization of what often was considered an ideal future. Thus there is one ideal at least that has become a fact.

The participation of the most intellectual class of the lay public in what formerly would have been, and was, the exclusive domain of the profession, proves that the conviction is gaining ground that medicine is both the most humane and the most practical of sciences. Indeed, science and practice are not divergent. Their aims are identical, they serve each other, and both joined serve mankind.

Learning and practical tendency go very well with each other. That is what I shall prove by the discourse of a gentleman who is known to erudite men of all classes as a scholar, to his professional brethren as a learned physician, and to his numerous admirers among the public at large as a consummate practitioner—Dr. William H. Draper.

DR. WILLIAM H. DRAPER then delivered the Anniversary Discourse (see p. 589), selecting for his subject

THE PRINCIPLES AND PROGRESS OF MODERN THERAPEUTICS.

At the close of the paper, which was listened to with marked attention, DR. FORDYCE BARKER moved that the thanks of the Academy be voted to Dr. Draper for his

most excellent discourse. The motion was duly seconded and carried unanimously.

Proposed amendments to the by-laws were then read, after which the Academy adjourned.

SECTION IN PRACTICE.

Stated Meeting, November 16, 1886.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

DR. A. JACOBI read a paper (see p. 593) on

FOLLICULAR AMYGDALITIS.

The discussion was opened by DR. C. HEITZMANN, who objected to the use of the word gland when speaking of the tonsils. There was no such thing as a lymph-gland. There was lymph-tissue composed of follicles and interfollicular spaces. He preferred to use the English term, and say lymph-ganglion. Lymph-vessels and lymph-tissue did not mean the same thing at all. Lymph-vessels were not very numerous, but the tonsils were composed largely of lymph-tissue, best seen in fœtuses. He uses the terms lymph-tissue and myxomatous tissue synonymously, a view not generally accepted. He favored the theory of causation by micro-organisms.

DR. T. E. SATTERTHWAITE, being called upon, said that he agreed with Dr. Jacobi that the name "lacunar" amygdalitis was unnecessary, and might with profit be expunged from our nomenclature. He also agreed with him in the fact that this form of tonsillitis was closely allied with tonsillar diphtheria, and gave two instances bearing on the point. In 1875 he received from Dr. W. W. Vermilye a piece of diphtheritic membrane, detached by coughing on the seventh day of the disease. The patient, a girl six years of age, had been attacked with what seemed at first to be a simple follicular tonsillitis. On the sixth day the tonsils, palate, and pharynx were covered with a thick exudation, which peeled from the palate quite easily, leaving a bleeding surface behind. The patient had albuminuria on the twelfth day, but recovered after two weeks' illness. The patches recurred when removed.

In 1876 he also received from Dr. William E. Bullard two pieces of diphtheritic membrane. The patient, a boy six years old, had had enlarged tonsils for some weeks. On the first day of the attack there was a simple pharyngitis; on the next, membranes formed in both tonsils, uvula, and anterior nares. The patient recovered after an illness of thirteen days. The regular symptoms of diphtheria were present.

Dr. Satterthwaite then stated that he presumed the reason for his being asked to speak arose from the fact that he had been known to have made some studies on the pathology and pathological anatomy of diphtheria, which, it was clear from the statements of the speaker, was an allied disease. He thought it well, however, at the outset, to give his own classification of inflammatory tonsillar affections, and he was happy to say that in adopting such a simple classification as he offered he was in harmony with the laryngologists. His divisions were as follows:

1. Simple or superficial tonsillitis, which might be a catarrhal affection of the mucous surface, or enter also into the crypts or lacunæ, which then had received the name *lacunar tonsillitis* or *amygdalitis*.

2. Deep or parenchymatous inflammation of the tonsil was a more grave affection, that might originate from the surface or from the deeper parts. It was synonymous with quinsy. It might terminate in resolution, more often in abscess, rarely in gangrene.

3. Another form might be called gangrenous. The tonsils were then attacked with an inflammation that early showed a tendency to sloughing. It was also called putrid sore throat. He had observed such a condition might be due to other causes, and sometimes it seemed to be a variety of the *gangræna oris* that is seen about the lips and gums of children.

4. Membranous tonsillitis. In this case there is an actually organized membrane on the tonsils. It might be due to diphtheria or other causes, just as some other membranous exudations in other mucous surfaces were due to causes apart from diphtheria.

5. Finally, there was an ill-defined group of tonsillar inflammations, that had been described as "rheumatic," "gouty," "mycotic," etc. With the two former he might say he had no personal acquaintance. In the latter instance the one case that he had carefully examined was from the throat of a child that died of scarlatina. The patch was not membranous, *i.e.*, organized, but was made up of a feltwork of fungi that was thought to belong to the penicilium glaucum with bacteria of various kinds, and epithelium and granular débris.

As, however, the paper seemed to bear most upon the clinical distinctions, if any there were, between superficial tonsillitis and tonsillar diphtheria, he would venture to point to the signs that he thought most valuable in effecting a differential diagnosis, and he relied upon the cases that had formed the basis of his report (in conjunction with Dr. E. Curtis) to the New York Board of Health in 1877, in giving the diagnostic signs of diphtheria.

1. Diphtheria was apt to be ushered in by a chill, and followed more or less rapidly by a fever that often was high, in one case reaching to more than 106° F. There were also convulsions, drowsiness, or stupor in a moderate number of the cases, and severe prostration. In follicular amygdalitis the symptoms of invasion, though at first sharp, were less apt to be associated with high fever, and never with a protracted high temperature, unless a complication existed. Although there was prostration it did not continue long.

2. In diphtheria the tonsils were apt to be attacked first, but the disease would usually spread, in severe cases, to the adjacent parts, such as the pillars of the fauces, uvula, and up into the nares. In follicular tonsillitis the patches were confined to the tonsils, though the pharynx might be inflamed, and often was.

3. In diphtheria the attack was much longer in duration, lasting on an average from six days to three weeks. Superficial tonsillitis almost always reaches its height on the third day, and was over in a week.

4. In diphtheria we are apt to find an engorgement of the adjacent lymphatic glands. In superficial tonsillitis this incident is rare; in quinsy it may occur.

5. The membrane of diphtheria, as found upon the tonsils, consists, in my opinion, of a fibrillated network in the interstices of which there is pus, epithelium, bacteria of rod and round forms, granular débris, oil-globules, and sometimes thalli or spores of some fungus. In follicular tonsillitis there is no fibrillated tissue, but the secretion of the mucous membrane forms the matrix.

6. The membrane of diphtheria is apt to adhere closely, and when removed leaves a bleeding surface in most cases, especially where the surface is covered with flattened epithelium. In superficial tonsillitis the membrane is easily brushed off, unless it has become dry, as happens sometimes when the mouth is much open, or when the patches are closely adherent to the follicular discharges. Any form of the ordinary mould fungi will cause the cohesion of such a patch.

7. Diphtheria has been proven in some instances to be propagated by a distinct contagion. In follicular tonsillitis the evidence of contagion is not well established, or rather it has not yet been conclusively shown that it is propagated by a personal contagion as distinguished from a telluric or miasmatic agency; and it is possible that it may be induced by simple cold, a digestive attack, or unusual fatigue.

8. Uræmia, as evidenced by convulsions, drowsiness, coma, and albuminuria, with granular and blood-casts in

diphtheria. In our cases, which were undoubtedly severe, they occurred in about thirty-three per cent. In follicular tonsillitis there is probably no albuminuria, except as produced by the high temperature, and then it is short-lived.

9. In diphtheria membranes may appear at any time from the first to the sixth day in a pronounced case. In simple tonsillitis the membrane is almost uniformly gone on the third or fourth day.

10. Paralysis of some kind is a sequel to diphtheria in a small number of cases. In simple tonsillitis it probably never occurs, although throat paralysis may follow quinsy or any sloughing process, if sufficient tissue be destroyed.

11. The fatality from diphtheria may reach fifty per cent. It exceeded this figure in our cases where the records were complete. All forms of diphtheria were included. Deaths from superficial tonsillitis are so rare that it may be said they practically do not occur.

Dr. J. Lewis Smith believed that there was no relation between the two affections, except that diphtheria might occur as a secondary disease and then it would be a complication of a pre-existing catarrhal inflammation. He preferred to use the term follicular pharyngitis, because the pharyngitis was the prominent feature early in the case. This simple affection begins abruptly, frequently with as high temperature as occurs in diphtheria. Its multiple occurrence in families is an interesting feature, and is probably due to a specific micro-organism, although he was not certain that the disease is contagious. He had treated as many cases as he had of diphtheria and had lost only one patient.

Dr. C. E. Billington continued the discussion, and said that follicular amygdalitis occurred both sporadically and epidemically, and that its causes were "catching cold," epidemic influence, and local, unwholesome conditions. He had seen it, in several epidemics, very prevalent in populous neighborhoods. He recalled one instance in which it affected nearly all of the children in all of the families in a large tenement-house. In its epidemic form it is, he thought, in some degree infectious, because he had so often seen it go through families of children, successive cases occurring at intervals of one, two, or three days, just as occurs with diphtheria or scarlatina. He had seen it manifest especial severity and virulence when complicating the effects of malarial or filth poisoning.

He regarded follicular tonsillitis as a disease, *sui generis*, and not a milder grade of diphtheria. The two diseases are not usually concurrent in the same patient, nor does the one shade off into, nor lead up to the other. The exception to this rule is that when diphtheria is epidemic any catarrhal condition of the faucial mucous membrane is an inviting soil to its germs; but even then it does not usually supervene until the follicular tonsillitis has run its course. As this requires only a very few days, such cases as those mentioned by Dr. Smith and Dr. Satterthwaite are, at such times, not infrequent.

Follicular tonsillitis differs from diphtheria in not causing constitutional poisoning, either septic or specific. It does not cause nephritis (except as any febrile catarrhal affection may occasionally do); it does not cause paralysis, and he had never known of a fatal case.

The differential diagnosis of these diseases was very important, as they were very liable to be confounded.

The onset of follicular tonsillitis is undistinguishable from that of diphtheria in the amount of febrile and nervous disturbance. He had known it to be accompanied with convulsions, vomiting, and much apparent prostration. Its second stage, that of follicular exudation on the inflamed tonsil, may closely resemble diphtheria. Its third stage, which occurs after one, two, or three days, is that of the disappearance of this exudation, exposing in its place the characteristic appearances of erosion or excavation in the surface of the tonsil. These last appearances are pathognomonic, but the diagnosis is usually called for at an earlier stage. In the second stage, or that of exudation, the diagnosis is made easy, in the majority of cases, by the appearance of whitish or yellowish points projecting, or liquid oozing, from one or more of the lacunal orifices; for these appearances are pathognomonic. It is made easy in many other cases by the evidently soft and pultaceous character of the deposit on the tonsil, and by its lying loosely and superficially on its surface, from which it is easily removed with a brush or swab. There is a smaller proportion of cases, but yet quite numerous in the aggregate, in which the diagnosis is much more difficult. In these cases the patches on the tonsils may not only closely resemble in appearance diphtheritic membrane, but are, in fact, quite firm in texture, and quite closely adherent to the mucous membrane. In occasional instances, these are so large as to cover nearly the whole of the tonsil. In company with these there are sometimes seen on the adjacent surfaces of the uvula or the faucial pillars, deposits of the same material, or smearings of white tenacious mucus, that are very deceptive to the eye. To complete the picture, the swollen throat may be filled with thick yellowish or sanious, and sometimes fetid, muco-pus, the *ensemble* being that of quite a grave case of faucial diphtheria.

But, it might be asked, what ground of certainty had he that any such cases were not in reality diphtheritic? He would answer, because we can accurately predict the subsequent course of events, which is that, after two or three days, the diphth*eroid* appearances will have vanished, leaving in their place the typical erosion and excavation in the tonsil; and that there will be none of the sequelæ of diphtheria.

In a paper which he read before the Academy in 1880, and which was published in The Medical Record of March 27th of that year, he mentioned, among other points or methods in this diagnosis, two which he had learned in the school of experience, and which, so far as he knew, had not been previously published. If they had not been, it was merely an illustration of the truism that it was sometimes the simplest and most obvious things that escape notice and mention. As he still believed them to be of practical utility, he briefly recapitulated them.

The first related to the location of membranous patches. The diphtheroid patches of follicular tonsillitis, being formed by exudation from the lacunal openings, are usually limited to that more central portion of the irregular convexity of the tonsil which is the site of the principal and most numerous openings, while true diphtheritic membrane is not, according to his observation, usually thus limited; but when it occurs in a small patch it is apt to occupy a more lateral or marginal position. Hence, patches which are limited to the former region and unaccompanied by membrane in any other location, will usually be found to be follicular, while those, however small and slight in appearance, which are seen on the posterior or the anterior, the upper or the lower marginal portion of the tonsillar surface, should be regarded with grave attention and their nature carefully investigated.

He had seen diphtheritic membrane in its formative stage extending in a slight streak or in spots across the tonsil. In these instances it was easily to be seen that the streak or spots did not emerge from the lacunal openings, and bore no relation to them, which was, in reality, the essential point to be ascertained in the diagnosis.

At this point the rule of the Section which limits each speaker to ten minutes brought Dr. Billington's remarks to a close. The following notes of what he was about to add, had time permitted, have been furnished by him as essential to the completeness of his statement:

[The second point referred to is a method which is especially applicable to those grave cases of follicular tonsillitis which he had sketched as so closely resembling diphtheria. In these cases a syringing of the throat with water will cleanse it of much deceptive material, expos-

s whole mucous membrane clearly to view. The heroid covering of the tonsils will be, in part at broken up and washed away, showing its friable and rficial character and its relation to the distended la- l orifices. A prompt and accurate diagnosis is thus e practicable, by a simple and readily available iod, in many cases in which it would otherwise be cult or impossible.

should be added that there are cases in which the t experienced physician must reserve his diagnosis short time.

here can be no doubt that follicular tonsillitis is often aken for diphtheria. He had personally known of a few instances of this error, causing much needless m, and made in some cases by intelligent, conscien- s, and not inexperienced physicians.

Dr. Lefferts, in a valuable paper read by him before the ademy in 1879, called attention to the striking resem- nce between the natural history of follicular tonsillitis l the "catarrhal diphtheria" of Oertel. Dr. Billing- had in not a few instances, on reading in journals counts of the successful employment of this or that ther- eutical agent in the treatment of diphtheria, been im- essed with the fact that the descriptions of the location, arse, and termination of the disease were strikingly sug- stive of follicular tonsillitis, and of nothing else. In t, he believed that all reports of large numbers of cases diphtheria, in which the disease was mainly limited to e tonsils, should be regarded with suspicion. In a list forty carefully studied cases, which he described in the aper to which he had referred, eleven only, or twenty- ven and a half per cent., were thus limited, and he be- ved that proportion to be quite as large as the aver- ge.]

Dr. L. Emmett Holt believed that follicular amyg- alitis occurred both as a sporadic and an epidemic dis- ase—in both instances being, as a rule, sharply defined om diphtheria. If the connection between the two ere close, and physicians all the time discussing cases f real diphtheria as those of simple amygdalitis, we ould expect that institutions which furnished many ases of amygdalitis would also give some of undoubted iphtheria. The facts did not support this. Dr. Haig- Brown, medical officer to Charterhouse School, in Eng- land, who had five hundred boys under supervision, had met with four hundred and sixteen cases of amygdalitis among them in three years, and only one case of genuine diphtheria.

Dr. G. A. Spalding, of this city, had stated that at the House of Refuge cases of amygdalitis were con- stantly occurring, yet no clear case of diphtheria had been seen there in years.

Dr. Gibney had made a similar statement with refer- ence to the Hospital for the Ruptured and Crippled, during his service there. In both institutions a large number of older children and adolescents were under observation.

Dr. Holt's personal experience in amygdalitis was based upon three hundred recorded cases, which had been mostly seen in dispensary practice. The symptoms were strikingly uniform. In acute cases the invasion was abrupt, the temperature high, and, unless compli- cated, the fever seemed to be limited to three days, irre- spective of treatment. A temperature of 105° F. was a common occurrence; he had in several cases seen 106°, and had known of one case in which it was 107°. Tran- sient albuminuria, when the temperature was high, was not very rare, but there were no casts or blood-globules in the urine. The group of symptoms presented were suggestive of a general rather than a local disease. It showed no tendency to asthenia; convalescence was rapid.

In pharyngeal or tonsillar diphtheria, on the other hand, the temperature was low, 100° to 101.5° F., the higher range showing extension into the air-passages or into the nares. The albuminuria of diphtheria was not transient, and bore no relation to the temperature; casts and blood, as well as albumen, were generally present. A marked tendency to asthenia was one of the most con- stant features of diphtheria; convalescence was slow.

The patches of membrane seen in simple amygdalitis could usually be easily removed without bleeding, and lasted only four or five days, and showed no tendency to spread; the membrane of diphtheria, on the other hand, involved deeper tissues, caused bleeding, rarely lasted less than a week, and showed a marked tendency to spread to the adjacent mucous surfaces.

Dr. Haig-Brown had recorded two epidemics in which simple amygdalitis was unquestionably spread by con- tagion; hence this fact, though always suggestive of diphtheria, was not to be taken alone as proof that we were dealing with this disease.

The occurrence of paralysis was to be regarded as establishing positively the existence of diphtheria. In doubtful cases *all* the symptoms were to be taken into consideration, and there were few in which a positive differential diagnosis could not be made after watching a case for a day or two.

Dr. Holt called attention to the frequency of tonsillitis in patients with a rheumatic diathesis; the occurrence was too common to be regarded as a mere coincidence.

Dr. J. E. Winters thought that if mild sore throats were frequently diphtheria, more of the cases would ter- minate as diphtheria terminates, yet such a termination was scarcely ever heard of. With reference to Dr. Jacobi's statement that membranous laryngitis never gives rise to elevation of temperature, he regarded it as cer- tainly a mistake, because he had seen cases of laryn- geal stenosis with considerable elevation of temperature throughout, and where post-mortem examination had verified the diagnosis. Three weeks ago he performed tracheotomy in a case of diphtheria, with a temperature of +103° F., and the temperature remained elevated un- til the tube was removed.

Dr. H. D. Chapin thought it probable that there was such a disease as punctate diphtheria which resembled follicular tonsillitis, yet he knew of no way by which a differential diagnosis could be made at the outset, and he thought that it was impossible for most men to make the distinction.

Whether the infection in diphtheria and certain forms of amygdalitis was the same he was unable to say. It had appeared to him that there was a difference in degree of severity in different cases of simple amygdalitis.

Dr. Walter L. Carr related briefly the cases of three trained nurses who were taken ill while attending patients with diphtheria and after tracheotomy for diphtheritic laryngitis.

The first was a nurse, of phthisical tendency, who had had previous attacks of amygdalitis. She had in this instance a rigor, followed by fever and temperature of 102° F., in the mouth. There was exudation on the left tonsil, and the edges of the pillars of the fauces were covered with a thin membrane. This was easily sepa- rated, and did not cause bleeding or seem in any way to have a close attachment to the underlying structure. The exudate had all disappeared at the end of four days, but the patient remained weak for some time. The pulse was irregular, and albumin appeared in the urine.

The second case was a nurse who was in the room with the first patient. The onset of the disease was very se- vere—sharp rigor, fever, with temperature of 104½° in the mouth, profuse sweating, and great prostration. On ex- amination the left tonsil was found to be covered in an irregular, patchy manner with a creamy exudation. There was no difficulty in introducing a probe into the lacunæ, and the exudation was easily removed, showing the tonsil to be congested, but otherwise apparently healthy. In two days the nurse was well and attending to her duties.

In the third nurse the exudation appeared on both tonsils, and was punctate, as if due to a filling of the

lacunæ. There was also a thin membrane streaked over the tonsils and fauces that left a slightly bleeding granular surface on removal. Albumin in the urine and irregular pulse persisted for two weeks. It was a month before the nurse was able to return to her occupation.

A fourth nurse, who had been exposed to the third patient, was said to have had a sore throat, but she was not observed by Dr. Carr. No paralysis followed any case.

The conclusion from the study of these few cases leads us to believe that follicular amygdalitis can be caused by direct infection from diphtheritic poison. Contrariwise, can the contagium of the follicular exudation produce diphtheria? It seems not only possible but probable that, under certain conditions, it can.

Dr. Jacobi said that the copious notes he had taken were for his own benefit, and they were not to be used in closing the discussion. He had gained much information, and was grateful for the attention which his paper had received. There were but few points to which he wished to refer. The first was concerning Dr. Satterthwaite's mortality of fifty per cent. It must be borne in mind, that the specimens of membrane which he received were from the worst cases of diphtheria, in which the pieces were discharged spontaneously from the mouth, and such patients were very apt to die. Dr. Winters had misunderstood him before, and also to-night, as he (Dr. Jacobi) had stated that when membranes are located upon such parts as are clad with pavement epithelium, upon parts which have but little connection by lymph-passages with the general organism, there is no fever. Dr. Winters had tracheotomized and found plenty of membrane. Those were not the cases of which he had spoken, and had referred only to those cases in which the diphtheritic membrane was upon the tonsil; in such cases there is no fever. It was natural that there should be no fever in such cases, and experience had taught him that it was absent. When, therefore, he found a case of laryngeal obstruction without fever, he said, this is a case in which there is membrane upon the vocal cords, and nowhere else. Dr. Winters had proved the same thing; for, in cases in which there is membrane over the trachea and there is a large amount of lymphatic connection with the general organism and the membrane is not lifted off, there is fever.

He feared that he had given a wrong title to his paper. Perhaps, it should have been "Doubtful Follicular Amygdalitis," as he wished to direct attention to the cases close to the boundary line. He meant to speak of the cases in which it was easy to make a mistake in diagnosis, as it was sufficiently easy to make a differential diagnosis between simple follicular amygdalitis and severe diphtheria.

As Dr. Chapin had said, there are a number of cases in which it is impossible to make a diagnosis, and in these doubtful cases he claimed that it was better to regard them as belonging to the more dangerous form of disease, because very frequently they are of the dangerous variety.

Of Dr. Carr's cases, the second would have been diagnosticated as follicular amygdalitis had it been seen apart from diphtheritic cases, and the others were doubtless true diphtheria. In the cases on the border line, those difficult of diagnosis, it was better not to say, this is a case of diphtheria, but to tell the people that it is one in which we shall be obliged to wait until to-morrow before a diagnosis can be made.

The Section then adjourned.

A Novel Method of Making Good House-Servants.—In a discussion on laparotomy, at the meeting of

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 27, 1886.

John A. Wyeth, M.D., President, in the Chair.

Dr. T. Mitchell Prudden presented specimens from a case o

OBSTRUCTIVE JAUNDICE, WITH SITUS TRANSVERSUS OF THE ABDOMINAL VISCERA.

For the epitomized clinical history he was indebted to Dr. J. S. Ely, of the first medical service in Bellevue Hospital, as follows:

A middle-aged Irish laborer had a night attack of gastro-enteritis, followed by jaundice, about eighteen months before admission to the hospital. The jaundice persisted, with anorexia, heaviness after eating, occasional dizziness, diarrhœa, and occasional nausea, but no gastric pain and no vomiting. He continued to lose flesh and strength, and came to the hospital for failing strength, loss of appetite, and dizziness. His family and previous history were good.

The liver was found considerably enlarged, extending well over to the left side, somewhat tender and smooth. Slight dulness and râles at the right apex.

Nothing abnormal was observed on palpation of the abdomen. The patient remained in much the same condition for a month after admission.

On September 25th, without apparent cause, he had a chill, followed by a rise of temperature to 103° F. It fell slightly during the night, but went up again to 106° F., and fell again to normal by the next morning.

Two days later there was another sudden rise to 107½° F., and a sudden fall. The temperature continued down until October 12th, then it suddenly rose to 107¾° F., and remained between 103–105° F. until just before death, when it fell for a day, rising suddenly to 105½° F. at death. He gradually failed, and, with numerous crepitant râles, but no evident consolidation, died on October 20th. A few days before death a hypodermatic needle was introduced into the liver at a point one and a half inch below the lower border of the ribs, and a little to the right of the median line. A thin, greenish liquid, containing solid particles, was obtained, which contained very large numbers of bacteria.

A subsequent introduction of the needle, at apparently the same point, was rewarded by only a few drops of blood, which was used for cultures-purpose with entirely negative results.

Autopsy.—Body emaciated; skin yellow. Heart normal. Lungs; emphysema and chronic bronchitis, with interstitial pneumonia and œdema.

The omentum was absent, the cæcum lay in the right hypochondriac region. Along the edge of the liver, which projected slightly beyond the free border of the ribs, nearly equally on both sides, lay the ascending colon, while the transverse colon lay in the position usually occupied by the descending colon. At the brim of the pelvis, on the left side, the descending portion of the colon took a half-turn to the left and upward, forming, with the sigmoid portion of the gut, a loop whose upper portion lay above and to the right of the umbilicus. The sides of this loop were bound closely together. The colon was thus turned partially around to the left on a horizontal axis. The gall-bladder was very much atrophied, with thickened walls; was bound firmly to the lesser curvature of the stomach, and lay to the left of the median line. Its cavity was not larger than a small hickory-nut. The spleen was on the right side, in about the normal relative position. It was large and trilobed, with one of the lobes much elongated. There was below this an accessory spleen, about

the right side, and the pylorus well over to the left. The duodenum made a large double curve, and about three inches from the pylorus was a diverticulum directed upward and to the right, about as large as a small hen's egg. The pancreas lay largely on the right side.

The common bile-duct was completely occluded by a gall-stone about half an inch in diameter, while several smaller calculi lay above in the common and hepatic ducts. The hepatic duct was considerably dilated.

The liver was cirrhotic and somewhat enlarged. The left lobe was nearly as large as the right, and from its lower surface projected a conical lobule about two and a half inches long and one and a half inch in diameter at the base. The generative organs were normal.

It is evident from the position of the organs that the bacterial fluid, which it was supposed came from the gall-bladder, was derived from the gut at the part corresponding to the ascending colon, which was in the place ordinarily occupied by the gall-bladder.

As an example of transposition of the viscera this case is interesting, as the abnormality was confined to the *abdominal* organs. It also affords an example of the tendency of the colon to be independent of the other abdominal organs in visceral transpositions, cases having been observed in which, with complete transposition of both thoracic and abdomnial viscera, the colon was in its normal situation.

Dr. Roosevelt remarked that the case was interesting to him because it occurred in his own service, and illustrated the difficulty sometimes encountered in making a diagnosis of the cause of obstructive jaundice. There was nothing in the history that pointed toward the presence of gall-stones. Physical examination reached the diagnosis of enlargement of the liver, particularly of the left lobe, which was really the transposed right lobe.

He also referred to another case, in which the heart was in its normal position, yet the area of dulness led him to the suspicion that the liver was transposed; there was no dulness in the region normally occupied by the liver.

Dr. Prudden, in reply to a question asked by the President, said that these cases were of infrequent occurrence, and that transposition of the heart and abdominal viscera were very liable to be associated.

The President said that, according to Hyrtl, persons with complete transposition of viscera were usually left-handed; but especially when the heart is on the right side.

Dr. Prudden referred to a report of eleven cases in which inquiry was made on this point in three cases, and the persons were right-handed.

Dr. J. West Roosevelt presented specimens which illustrated the lesions of

CORROSIVE-SUBLIMATE POISONING, WITH MARKED LESIONS OF THE KIDNEYS AND INTESTINES.

The case was interesting because of the rarity with which bichloride of mercury is used for suicidal purposes, and also on account of the enormous dose taken. The clinical history was interesting because of the nearly complete suppression of urine for several days, yet no uræmic symptoms were developed. It might be urged that the profuse diarrhoea acted vicariously; but at the same time it should be borne in mind that in many cases these nervous phenomena are merely accidental, and that they are not necessarily produced by destruction of the kidneys.

S. B——, nineteen years of age, single, colored, and a domestic, took, on the morning of May 6, 1885, *twenty-five* grains of corrosive sublimate in solution. She vomited in five minutes. There was severe pain at once in the throat and abdomen. Severe purging began in an hour and a half. Shortly after admission, some hours after the poisoning, she passed urine containing twenty per cent. of albumin, and abundant granular casts, epithelial cells, pus, and blood. The patient stated that her feet and hands had swelled occasionally during the past year.

May 8th.—Constant purging, and ℥ jss. of urine has passed since admission; and on May 9th ℥ j. of urine was drawn with the catheter.

May 10th.—Fifteen stools, small in amount and containing blood. Vomiting of yellow fluid free from blood. Great abdominal pain. Urine very scanty, albuminous, granular and epithelial casts; epithelial cells of all shapes—flat, tailed, and polyhedral.

May 12th.—Died in collapse, after continued purging and vomiting and abdominal pain. She was delirious on the night before death, but became rational in the morning. Stools, on day of death, dark slate color and fluid. Her temperature was normal or subnormal, save on day of admission, when it reached 100° F., and on the night before death, when it reached 102.8° F.

Autopsy, one hour and fifty minutes after death.—Body well nourished. Rigor mortis absent. *Brain* not examined. Visceral *peritoneum* injected and dry, and coated with fibrine, especially over the great curvature of the stomach and lower end of the ileum. Mesenteric glands as large as a Lima bean. The *heart*, *lungs*, and *spleen* were normal. The *liver* weighed three pounds three ounces; was soft, slightly mottled, red and yellow, and the cut surface was shiny. *Kidneys:* Perhaps a little enlarged; capsule not adherent; surface smooth; cortex somewhat thickened, yellow, and somewhat granular in appearance; medullary rays appear as paler yellow lines in the yellow cortex. Under the microscope there seemed to be no infiltration of the stroma with cells. The epithelium of the convoluted and some of the straight tubes was in places cloudy, swollen, and granular. In some of the tubes a curious change had taken place. The lumen of the tube was, in some parts of its course, filled with closely packed, round, homogeneous bodies, which showed no sign of structure or nucleus. These bodies stained deeply with eosin. Toward the distal end of the tube they seemed in places to have fused and formed bodies looking like hyaline casts, but so large as to completely fill the tube, which was denuded of its epithelium in these places. That these bodies were altered epithelium was shown by the fact that in many parts of the tubes the epithelium might be seen in which a similar change was in progress. Also cells showing a similar hyaline appearance at the periphery, and others more extensively changed, with nuclei of indistinct outline which stained poorly, were to be seen here and there still attached to the basement membrane. In some places the tube was simply filled with granular detritus. This hyaline appearance might be due to hyaline degeneration or to coagulation necrosis. In some tubes small flat cells could be seen, which seemed to be newly growing. The blood-vessels were normal. The cells of the capsule of Bowman were swollen. *Stomach:* Mucous membrane swollen, reddened, coated with mucus, and showed numerous punctate hemorrhages. *Small intestine:* Mucous membrane of upper part injected and coated with mucus. In the lower two yards of the ileum were quite numerous patches, about one inch square, of gray appearance, covered with a thin false membrane. The *large intestine* throughout showed patches of false membrane, especially on the prominent folds of mucous membrane. The uterine cavity contained blood, and in the left ovary was a large, fresh corpus luteum.

The specimens were interesting, especially with reference to the local lesion, particularly marked in the large one, and consisting of the production of diphtheritic membrane.

Dr. John C. Peters had been deeply interested in the presentation of the specimens, because of recent discussions in the Section on Therapeutics and Orthopedic Surgery in the New York Academy of Medicine. The plan of treatment of Bright's disease, by the administration of corrosive sublimate, was commenced in the New

York Hospital forty-four years ago, by Dr. J. A. Swett, and afterward continued by Dr. Griscom and Dr. Joseph Mather Smith. The number of cases treated was twenty-six, and the majority were very much improved, although the fact remained that albumin did not disappear from the urine. It was given in doses varying from one-sixteenth to one-eighth, even one-fourth of a grain, every four hours, and always with the tincture of cinchona. One noticeable effect was that it produced diuresis, but in Bright's disease only. Orthopedic surgeons had used the drug, for its tonic and restorative effects, in scrofulous diseases of the joints.

In connection with the question of cause of nræmia, Dr. Peters referred to the latest theory, that the cyanide of ammonium is the active agent, a substance isomeric with urea.

Dr. H. J. Schiff presented microscopic sections from an

INTRACANALICULAR FIBROID OF THE BREAST.

Mrs. E.——, twenty-nine years of age, and a housewife, consulted him in June last, with reference to a small tumor in her left breast. Eight years ago, one year after the birth of her child, she noticed there a lump about the size of a bean. About one year ago it began to give her pain; sometimes neuralgic, at others a dull, burning pain, especially during menstruation and after manipulation. The tumor also began to grow rapidly. There was no history of hereditary disease. The patient was otherwise healthy. Menses normal.

The tumor was situated at the upper and outer part of the left breast, and was painful on pressure. On August 31st Dr. Schiff removed it under antiseptic precautions, and when, ten days later, the dressing was removed, union was complete throughout.

The tumor was encapsulated, and after removal of the capsule measured one and a half by one and five-eighths of an inch. At its lower part were two cysts one-eighth of an inch in diameter.

Microscopical examination showed it to be an intracanalicular fibroid.

Dr. Schiff also presented a

HÆMORRHOID

which he removed by Allingham's method, on October 25th, from a patient twenty-three years of age, on whom, ten months before, he had injected the tumor with a *ten* per cent. solution of carbolic acid without benefit, and one month later with a thirty-three per cent. solution with some benefit, but not very great.

The specimen, one of three tumors removed by operation, showed the site of the injections. There was a decided depression in the centre, which was apparently the result of inflammation set up by the carbolic acid. All around this central part the tumor was filled with blood.

Dr. Prudden said that the tumor from the breast was especially interesting, because it was a variety of neoplasm which had not been often recognized in this country. It is very liable to be mistaken for carcinoma, and the mistake is quite natural. These growths are rarely seen in their early stages, and only when the outgrowth has gone on to such an extent as to nearly or completely fill the acini.

Dr. Waldstein remarked that these tumors occasionally became malignant. He had seen three cases, which had been described in Virchow's *Archives* eight or ten years ago. In the beginning there was the same condition that existed in Dr. Schiff's specimen, namely, intracanalicular fibroma, but in parts there was proliferation which went beyond the typical form, and could be called carcinoma.

BRONCHO-PNEUMONIA—UNUSUALLY HIGH TEMPERATURE RANGE—SMALL PULMONARY ABSCESSES.

Dr. L. Emmett Holt presented the kidney and lungs removed from a child, eleven months old, who died of broncho-pneumonia at the New York Infant Asylum. The point of special interest in the clinical history was the unusually high temperature. The child was previously healthy, and the illness lasted sixteen days. For the first five days the temperature, when not reduced by antipyrin, ranged between 104° and 105.5° F. As the pulmonary signs did not seem sufficient at this time to explain the temperature, and as the spleen was so much enlarged that it could be distinctly felt, quinine was substituted for the antipyrin; four grains were given four times a day. This was stopped after two days, as the temperature rose in spite of the drug to 106.5° and then to 107° F. on the eighth day of the disease. This was brought down to 100° F. by two six-grain doses of antipyrin, given at four-hour intervals *per rectum*, as the stomach was irritable and the child not taking nourishment and stimulants very well. During the next four days the temperature record was phenomenal; it remained steadily at or near 106° F., unless reduced artificially. Antipyrin being required in too large doses for the child's condition, baths were employed in the following manner: The child was put into a bath at 100° F., which was gradually cooled down to 90° F., and continued for fifteen to twenty minutes. These were repeated about once in four hours. The temperature was thus reduced from two to three degrees, and the pulse and respiration were uniformly improved. The effect, however, rarely lasted more than three hours. During the last four days before death the temperature range was lower, rising above 105° F. only once, but touching that point nearly every day. By means of the baths it was kept most of the time below 104° F. The fever at no time was marked by remissions. The other symptoms were not especially grave. The cerebrum was not much disturbed; the pulse ranged from 160 to 180, and the respirations from 40 to 60. The urine was passed freely. The treatment was mainly directed to the fever, and sustaining the strength by food and stimulants. They were given unsparingly. The physical signs of consolidation were not apparent until the tenth day. The child died quietly of exhaustion on the sixteenth day of the illness.

Autopsy, made twenty hours after death.—Body well nourished; child large for its age. *Head:* The brain was moderately congested, otherwise healthy; the pia was "milky" in appearance over convexity and at base, and a mere trace of pus was seen; dura healthy; cerebro-spinal fluid measured two ounces; the sinuses contained dark post-mortem clots. *Chest:* No fluid in the pleural cavity. Left lung was consolidated throughout the greater part of the lower lobe, the surface of which was covered with a recent fibrinous exudation; quite a large area of consolidation was found at the right apex. The lungs elsewhere showed more or less disseminated pneumonia. Subpleural ecchymoses existed beneath the pleura covering the right lung, but no fibrine upon its surface. On making section of the lungs several small abscesses were found in the upper part of the left lower lobe and at the right apex. They varied in size from that of a small pea to a marble, and contained thick, creamy, odorless pus. The appearances elsewhere were those of a typical broncho-pneumonia. The bronchial glands were enlarged, but not cheesy. The heart contained a thin, laminated clot in each ventricle, closely adherent; its walls and valves were normal. *Abdomen:* Spleen about twice the usual size, and softer than normal. Liver, normal. A moderate catarrhal enteritis in the upper half of the small intestine; below, Peyer's patches were slightly swollen and pigmented, but otherwise normal; enlargement and pigmentation of the solitary follicles of the large intestine and moderate catarrh, chiefly in the cæcum and the ascending colon. Kidneys twice the normal size, weight, together, five and a quarter ounces. They showed to the naked eye very marked parenchymatous degeneration. Light-colored, soft, non-adherent capsule; in section cortex much thickened, of grayish-white color, markings indistinct. Careful search was made throughout the

body for tubercles, but none were found. The specimen was referred to the Committee on Microscopy.

DR. J. LEWIS SMITH remarked that from what he had seen of the effects produced by the two remedies, he should prefer salicylate of sodium to antipyrin in all diseases attended by prostration, such as fevers and pneumonia occurring in infants.

ABSENCE OF RIGHT LUNG—MALFORMATION OF THE HEART.

Dr. J. Lewis Smith presented a specimen removed from the body of a negro child two months old. When first seen, it was eight or ten days old. There was then great difficulty in making a diagnosis. The case was supposed to be one of pleurisy, but that could not be made out satisfactorily, nor could it be made out clearly that it was a case of lung consolidation. During the two months the child had thriven well, but died suddenly.

At the autopsy the thoracic organs were removed, and the following report had been submitted by Dr. L. J. McNamara. The specimen was also referred to the Microscopical Committee of the Society.

The specimen consists of a left lung with its usual division, and the heart and great vessels. Careful examination reveals, just at the aorta, a thin fragment of lung-tissue, but which had never been inflated. The trachea, opened from the posterior, presents the usual bifurcation into right and left bronchi. The left bronchus can be traced into the lung, but the right is lost about-one-fourth inch from bifurcation. The tissue supposed to be the rudimentary right lung was taken from this place. It does not present any of the appearances of lung-tissue.

Examination of the heart shows a large left ventricle which has three openings: One the aorta; one from the auricle, and one which communicates with a small opening, supposed to be the right ventricle, as the right pulmonary artery enters the heart at this spot. I cannot find any left pulmonary artery. There is but *one* auricle, which, in this specimen, is filled almost entirely with coagulated blood, and has the usual opening into left ventricle. The opening into the rudimentary right ventricle was enlarged, thinking that it might lead into the proper opening of the right ventricle, but instead it opened into the left. In order not to change the relations of the parts, this opening was closed with sutures.

The blood, therefore, coming from the venæ cavæ poured into the *one* auricle; from the auricle it was discharged into the *one* ventricle; from the ventricle it was sent into the aorta, and through the opening in the septum, shown by the paper, it was sent also into the right pulmonary artery.

The Society then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 14, to November 20, 1886.

GREENLEAF, C. R., Major and Surgeon. Relieved from duty at Columbus Barracks, O., and ordered for duty as Attending Surgeon at Headquarters, Division of the Missouri, and Examiner of Recruits at Chicago, Ill. S. O. 268, A. G. O., November 17, 1886.

TILTON, HENRY R., Major and Surgeon. Relieved from the duties of Attending Surgeon at the Headquarters, Division of the Pacific and Department of California. S. O. 96, Division of the Pacific, November 9, 1886.

WATERS, W. E., Major and Surgeon. Ordered from Fort Spokana to Vancouver Barracks, Wash. T., for duty at that post. S. O. 197, Department of Colorado, November 8, 1886.

HUBBARD, V. B., Major and Surgeon. Directed by Par. 8, S. O. 257, A. G. O., November 4, 1886, amended, to report in person to the commanding officer, Columbus Barracks, O., for duty. Par. 3., S. O. 268, A. G. O., November 17, 1886.

CALDWELL, D. G., Major and Surgeon. Granted leave of absence for one month, with permission to apply for twenty days' extension. S. O. 150, Department of the Platte, November 12, 1886.

SMART, CHARLES, Major and Surgeon. Granted leave of absence for one month. S. O. 265, A. G. O., November 13, 1886.

MACAULEY, C. N. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days. S. O. 118, Department of Dakota, November 8, 1886.

CROSBY, W. D., First Lieutenant and Assistant Surgeon. Ordered from Fort McDowell, A. T., to Fort Bowie, A. T. S. O. 110, Department of Arizona, October 29, 1886.

MORRIS, E. R., First Lieutenant and Assistant Surgeon. Ordered from Fort Bayard, N. M., to Fort Thomas, A. T. S. O. 110, Department of Arizona, October 29, 1886.

APPOINTMENTS.

MOORE, JOHN, Lieutenant-Colonel and Assistant Medical Purveyor. To be Surgeon-General of the Army. November 18, 1886.

BALL, ROBERT R., to be Assistant Surgeon with the rank of First Lieutenant. November 19, 1886.

PROMOTIONS.

BAILY, JOSEPH C., Major and Surgeon. To be Assistant Medical Purveyor with the rank of Lieutenant-Colonel. November 18, 1886.

HEIZMANN, CHARLES L., Captain and Assistant Surgeon. To be Surgeon with the rank of Major. November 18, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 20, 1886.

NASH, FRANCIS S., Passed Assistant Surgeon. Ordered to special duty Smithsonian Institution. November 26, 1886.

RHOADES, A. C., Medical Inspector. Ordered to special duty attending officers and families in New York City.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 20, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	36	8
Scarlet fever	25	5
Cerebro-spinal meningitis	4	4
Measles	253	38
Diphtheria	113	52
Small-pox	1	0
Yellow fever	0	0

HÆMOGLOBINURIA AND FUNCTIONAL ALBUMINURIA are diseases closely related, according to Dr. C. H. Ralfe, and are dependent upon an extraordinary breaking-up of the red blood-cells in the liver. This process is called hæmolysis, and its gradations are represented as follows:

Ordinary hæmolysis.	Urinary pigment, urea.	Normal urine.
Active hæmolysis.	Increase of urinary pigment, increase of urea.	Urine of digestion.
Increased hæmolysis.	Increase of urinary pigment, appearance of bile pigment, increase of urea, albumen in urine.	Functional albuminuria.
Extraordinary hæmolysis.	Hæmoglobin in urine, increase of urinary and bile pigment, increase of urea, albumen in urine.	Hæmoglobinuria.

—*The Lancet.*

THE MEDICAL PROFESSION AND PROPRIETARY QUACKERY.—In the *Philadelphia Medical Times* (October 16, 1886) Dr. S. S. Wallian offers some practical suggestions on the above subject. According to him, "Incomplete statistics show that the money expended by the people of the United States for secret and proprietary medical preparations aggregates annually more than eighty millions of dollars. When the reasonable statement is added that certainly more than one-half of these exploited remedies are positively detrimental rather than beneficial to their consumers, the subject becomes fairly tragic. Compared with this insidiously growing evil, war and intemperance are made to seem less formidable calamities. Limned in detail, the picture would be ludicrous if it were not in its results so fatal as to be actually appalling. For this unsatisfactory state of things there is no special or easily suggestible remedy. It may be assumed that ignorance is at the bottom of it, but it is inborn and transmitted ignorance. Generations back of us have contributed toward endowing us with a mania for dosing." Again: "There are anti-tobacco societies, anti-liquor parties, even anti-adulteration journals; but there are no anti-nostrum associations. In this connection the profession as a whole must plead guilty of a dereliction of duty. There is no doubt but by proper and persistent effort practitioners have it in their power to initiate a movement which would in time eventuate in wholesome changes in public opinion touching this vitally important subject." Two things still militate against any sweeping or sudden revolution in this direction—ignorance and tradition. But even these he holds are not utterly incurable. "Physicians themselves can accomplish much toward the desired end. Every medical practitioner owes it to his patrons, to his profession, and his conscience, to antagonize three prevailing and mischievous delusions: 1. That it is economy to doctor one's self. 2. That any remedy can be good for every ailment. 3. That irregular and unlettered 'doctors' who catch the public eye, through advertising display, owe their 'unparalleled success' to the possession of chemical or other valuable secrets which are unknown to the regular profession and chemists. The practitioner ought also to inculcate a few wholesome and general precepts: 1. That to regain impaired health does not necessarily imply the use of drugs. 2. That in consulting a physician a maximum of advice and a minimum of medicine is a consummation devoutly to be sought. 3. That the more intelligent people become the less they assume the responsibility of deciding questions of which only a skilful medical man is competent to judge, the less they listen to the catch-penny claims of advertising charlatans, and the less money they pay out for preparations which are not ordered or vouched for by someone in whose sagacity they confide. 4. That those who decline the use of all remedies, except when prescribed by a competent physician, experience uniformly better health, expend less money at the druggist's, and suffer infinitely less from imaginary evils, than any other class. When practitioners everywhere conclude to spend more time and effort in disseminating these and similarly axiomatic truths than in traducing competitors or wrangling over medical politics, there will be less money poured into the coffers of the wily patent-medicine sharks, less quackery both in and out of the profession, and the medical millennium will draw nigh."

THE PROPER WAY TO LIGATURE ARTERIES.—At a meeting of the London Clinical Society recently, Mr. Thomas Smith said that he considered the tying of a large artery in its continuity by a single thread fastened by a reef knot a defective operation, as the knot dipted the ligature should be passed twice round the vessel (an easy procedure with an aneurism-needle, which may carry one end of the ligature forward and bring back the other) as a clove-hitch, and then pulled firmly across the artery. This ligature had no knot; but if it were not considered to be secure enough, the two ends could be tied in a single knot after the tightening of the clove-hitch, and the knot would not then be in contact with the arterial wall. As Dr. Edmunds and Mr. Ballance had shown at the Royal Medical and Chirurgical Society last session, it is not necessary nor desirable to injure the coats of an artery in order to secure a permanent obliteration of its canal.

THE PRESENT STATE OF GYNECOLOGY.—Just now, also, the gynecologists are in what the president, Dr. Reamy, very aptly designated as "the abdominal epoch of gynecological surgery." In this, as in all surgical epochs, there are those who, it has been said, have manifested an unwholesome "enthusiasm" in the use of the knife. Indeed, so incredulous have many become concerning the ultimate benefit to be afforded by some of these operations, that all gynecologists have been divided into two great classes, expressively named the *benign* and the *malignant;* more scientifically, perhaps, the medical and the surgical.—DR. CARPENTER, in *The Epitome.*

BELCHING INFLAMMABLE GAS.—Dr. F. E. Quinby, of Fayetteville, N. Y., writes: "There is a gentleman of this town, who possesses a good reputation for truth and veracity, who narrates a curious tale. He is troubled with a dyspeptic difficulty, one of the symptoms of which is the eructation of gas, that will take place toward evening. Last night, at or about one o'clock, he lighted a lamp, and was just about to blow out the match when some of this gas, was belched. As it issued from the mouth on to the burning match it took fire—'it went puff.' The flame, which is described as being of a bluish color, singed the hair, eyebrows, and mustache; also as the gentleman gasped, some of the flame was slightly inhaled, burning the hairs of the nose, the lips, and the tongue slightly. There was no coal-fire in the room at the time. I do not know of a parallel case, therefore I write you, hoping that through the columns of your valuable RECORD some of my medical brethren will offer a solution."

MR. JONATHAN HUTCHINSON is thus described by a correspondent of the *North Carolina Medical Journal*: "He seems scarcely more than fifty years old, is tall, rather thin and round-shouldered, has dark hair and dark complexion, an intelligent but homely face, and might pass himself off at the State Fair or anywhere else as a North Carolina farmer, without the slightest fear of suspicion."

BAKERS' TEETH.—Dr. Hesse has found that bakers are peculiarly subject to dental caries, the disease attacking chiefly the anterior surfaces. He explains its frequent occurrence in this class by assuming that the flour which lodges on the teeth becomes converted into sugar, and then undergoes fermentation.

WARTS AND EPSOM SALTS.—It is now fairly established, says a writer in the *Medical Press*, that the common wart, which is so unsightly and often so proliferous on the hands and face, can be easily removed by small doses of sulphate of magnesia taken internally. M. Colrat, of Lyons, has drawn attention to this extraordinary fact. Several children treated with three-grain doses of Epsom salts, morning and evening, were promptly cured. M. Aubert cites the case of a woman whose face was disfigured by

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Original Articles.

A CONSIDERATION OF SOME UNUSUAL FORMS OF INTRA OCULAR HEMORRHAGE, WITH SPECIAL REFERENCE TO ETIOLOGY AND PROGNOSIS.

BY CHARLES STEDMAN BULL, A.M., M.D.,

SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY; CONSULTING OPHTHALMIC SURGEON TO ST MARY'S FREE HOSPITAL FOR CHILDREN, AND TO THE NURSERY AND CHILD'S HOSPITAL, NEW YORK.

THE class of cases to which I desire to call attention has interested me for some years, both because of their rarity and because of their somewhat doubtful causation. I refer to those cases of intra-ocular hemorrhage occurring in persons of middle and advanced life, who have been subjected to severe malarial poisoning. In these cases the blood is extravasated into the vitreous humor or aqueous humor, or both, and the attack is entirely unaccompanied by any other signs of intra-ocular inflammation. The hemorrhages always occur suddenly, and usually into the posterior part of the vitreous humor. The sudden and sometimes extensive loss of sight, together with a direct examination of the media of the eye, in these cases enable us to diagnose an intra-ocular hemorrhage as the cause of the disturbance. Very little has been written in regard to the effects of malarial fevers upon the internal tunics of the eye, though severe lesions of the optic nerve, with amblyopia and amaurosis, are now generally recognized as being occasionally produced by prolonged exposure to miasmatic influences. The occurrence of intra-ocular hemorrhages is merely hinted at, and yet when we consider the not infrequent occurrence of hemorrhages in other parts of the body in persons who have been the victims of protracted pernicious malarial poisoning, it should not surprise us that hemorrhages from the same cause may occur within the eye. Intestinal hemorrhage, epistaxis, bleeding from the gums, hæmaturia, and other signs of a general hemorrhagic tendency have been noted in persons suffering from severe miasmatic poison, especially in tropical countries, and in the southwestern regions of our own country, where the malarial fevers are so often of the congestive type. As a result of venous congestion caused by rapidly occurring temporary obstructions in the capillary circulation, it is known that small, even punctate, hemorrhages sometimes occur in the vitreous entirely independently of pulmonary or cardiac disease. When such hemorrhages are not due to inflammatory changes in the retina or choroid, Wecker and other authorities think that they are probably caused by some disturbance in the circulation, such as venous stasis or increase in the arterial tension, or else by disease of the vascular walls, such as fatty or atheromatous degeneration. Very often several of these causes combine to produce the hemorrhage. Hypertrophy of the left ventricle is now recognized as an important factor in the causation of retinal apoplexy, and presumably, also, in certain cases of hemorrhage into the vitreous. Fatty degeneration is also sometimes indicated by these vitreous hemorrhages. Another possible cause which of late has been brought forward is a gradual dilatation and hypertrophy of the entire vascular system—cardiac and vascular dilatation, without valvular disease or general cyanosis. We also admit that changes in the character of the blood, such as exist in progressive pernicious anæmia, sometimes cause these retinal hemorrhages. It is my belief that diminished intra-ocular tension, or any considerable change in tension, may give rise to vitreous hemorrhages. In such cases pulsation in the retinal arteries is frequently isochronous with the diastole of the radial artery, and this pulsation may be followed far beyond the margin of the optic disk. These pulsations in the retinal arteries occur almost constantly with insufficiency of the aortic valves, and yet may at times be entirely absent. The reason for this is that the change of tension in the arterial system is much greater than in a healthy circulatory system. It was formerly almost universally considered that large extravasations of blood into the vitreous came from ruptured choroidal or ciliary vessels; but some observers have come now to believe that in these cases the blood comes either from the papillary and retinal vessels, which are branches of the central retinal artery, or from the vessels of the sheath of the optic nerve. This is the view advanced by Wecker, and it has many adherents. Wecker states that in very many cases the blood may be traced directly to the papillary margin, or to some one branch of the central retinal artery. These "sheath-apoplexies," as he calls them, may occur successively in the two eyes, and are not infrequently met with in diabetic patients. Where they occur along the course of the larger vessels for some distance, it is sometimes difficult to distinguish them from retinal apoplexies.

It is certainly important to carefully observe the relation of these vitreous hemorrhages with the margin of the optic disk, and as soon after their extravasation as possible, which, of course, can only be done when the hemorrhage is a slight one. Wecker is of the opinion that they occur after a sudden change of temperature, or after some ordinary muscular exertion made by persons when in a state of congestion or fever, and are fifty years of age or over, or who are suffering from cardiac disease. It is probable, also, that similar hemorrhages occurring in young people are produced in the same way; but as the retina is more resistant in them and less liable to tear, the extravasated blood is more apt to pass forward in the retina, or between the latter and the vitreous membrane, and enter the vitreous humor in its anterior segment just behind the lens. Small extravasations of blood in the anterior portion of the vitreous sometimes occur after violent muscular efforts or exposure to malarial disease, but they are very different from these sudden and large extravasations.

A general filamentous or flocculent opacity of the vitreous is a not very infrequent result of one of these hemorrhages. These opacities may or may not be adherent to the retina and choroid, and when the pupil is well dilated they are seen to be suspended in the vitreous. These may exist without any other lesion of the eye, and might possibly be regarded as the consequence of periodic congestion of the blood-vessels with rupture and extravasation of blood into the vitreous.

As before stated, it is Wecker's opinion that most of these hemorrhages come from the vessels of the sheath of the optic nerve, and its method of occurrence he describes as follows: "The blood here at first opens a passage through the natural openings, follows the eccentric course of the hyaloid canal, and thence enters into the 'triangular space,' so called, of Stilling." Wecker considers that what Manz has called "retinitis proliferans" is nothing but the organization of large strata or

layers of blood extravasated in the posterior part of the vitreous. These layers become in time thinner and more translucent, and in contracting cause a deviation of the central vessels toward the point of implantation of these membranes. This view will, however, scarcely meet with general acceptance. He claims to have seen patients who have become suddenly blind from intra-ocular hemorrhage, in whose eyes the vitreous was occupied by several translucent membranes which divided it into regular segments. These, he asserts, are formed at first by extravasations of blood from the margin of the papilla which project into the vitreous, and says that he has in several cases been able to follow the various stages of their development and transformation.

These hemorrhages, assumed to be due to malarial poisoning, occur almost always in one eye, though they may occur in both eyes; but I have never seen a case in which they occurred simultaneously in both eyes. In every instance in my experience they have happened during the febrile or congestive stage. All my patients were forty years of age or over, and had been subject to malarial disease for a varying length of time, contracted in markedly miasmatic regions. In some the tension of the eye was increased; in others it did not seem to have suffered any change. The refraction was in the majority of cases slightly hypermetropic, while in a smaller number it was emmetropic, and in a few cases it was slightly myopic. In the majority of cases the blood seemed to be extravasated generally through the vitreous, but in a few cases the mass of the blood was certainly in the posterior part of the vitreous. The recurrences of the hemorrhages were always, as in the first instance, spontaneous, and sometimes frequent. The process of absorption was always very slow, even when but one hemorrhage occurred; and in some instances, after a brief period, the absorption seemed to be entirely stayed. In those cases in which the blood disappeared sufficiently to admit of a more or less satisfactory view of the fundus, there was never any arterial or venous pulse. In no case was there any valvular disease of the heart; but in some of the cases there was hypertrophy of the left side of the heart, though never to a marked degree. In a few cases there was an atheromatous condition of the arteries, as in the temporal and radial vessels, and in all of them there was a more or less marked irregularity in the strength and quantity of the blood-current. In no case was there complete restoration of central vision. In nearly all the cases there existed peripheral choroidal disease, usually atrophic in character and slight in degree, which could be distinguished with the ophthalmoscope after the hemorrhage had been partially absorbed. In none of the cases was there any tendency to either gout or rheumatism, such as Hutchinson describes in cases of spontaneous vitreous hemorrhage. In his cases there were always iritis, with vitreous opacities as well as hemorrhages, and he thought that the tendency to extravasation of blood was due to unequal circulation. We know from recent investigations that both low tension and high tension are compatible with liability to rupture of the capillaries. A condition of loss of balance is easily induced if the blood-vessels are not well under vaso-motor control, and they readily become empty in one place and overfull in another. In all my cases chronic renal disease was excluded by a careful and frequently repeated examination of the urine. There seems no reasonable doubt that the hemorrhages were due in the main to rupture of the choroidal or ciliary vessels, and possibly of the vessels of the sheath of the optic nerve, during the febrile or congestive stage of malarial attack, when there was a loss of balance in the vascular tension, and when the system had become the resulting opacities may have attained. If the choroid and ciliary body were in a healthy condition, these hemorrhages might be absorbed more rapidly and completely provided the patient could be removed from his miasmatic surroundings and a proper treatment and diet instituted. But unfortunately in these cases there was more or less atrophy of the uveal tract, and the blood disappeared very slowly. Any obstacle to the proper nutrition of the vitreous would of course stand in the way of the absorption of these hemorrhages, and this, of course, is always the case in large and sudden extravasations of blood. The most that can be hoped for in these cases is that they will eventually become such thin membranes as not only to be semi-transparent, but will also cease, by their contraction, to pull on the retina, and thus cause its possible detachment. These membranous opacities, the remains of organized hemorrhages, may and do last for years.

Case I.—C. H——, aged forty, travelling salesman; first seen March 27, 1874. Three years before, while in Texas, he was dangerously ill with quotidian intermittent fever of the congestive type, and on recovering consciousness, after a second attack, he noticed he could not see with the *right* eye. For six weeks the sight of the eye was so defective as to be useless, and he then began slowly to regain his vision. It was more than a year before he could see to read, and since then there have always been floating particles and thread-like bodies before this eye. He has had several attacks of fever since then, and with each one a more or less marked obscuration of vision in the right eye. During the last week in February, 1874, while under treatment, and walking in the street, he had a slight chill, which was very soon followed by high fever, and while in the febrile stage the sight of the *left* eye began to fail, and in fifteen minutes he was entirely blind. When I saw him the examination revealed: R. E., $\frac{20}{40}$. L. E., perception of light; tension + 1. Several filiform and membraniform opacities in right vitreous, and peripheral choroidal atrophy. In left eye, dull reflex from fundus at periphery, and vitreous full of blood. No cardiac or renal disease. Liver enlarged. Refraction hypermetropic, D. 1.50.

Case II.—F. K.——, aged sixty-eight, farmer; first seen August 10, 1874. When a young man he had intermittent fever of the ordinary tertian type, while living in New Jersey, which obstinately resisted treatment until a sea-voyage of some duration broke it up. Subsequently he settled in Indiana, and during his residence there on a farm became subject to severe chills and fever. Has had a number of attacks of loss of sight in both eyes, but does not remember how long they lasted. Thinks his vision much impaired in *left* eye. One week ago vision in *right* eye began to fail very rapidly, while suffering from the second stage of an attack of fever. Examination showed: R. E., $\frac{10}{100}$; tension + 1; blood in anterior chamber; large hemorrhage in vitreous; peripheral choroidal atrophy. L. E., $\frac{20}{100}$; extensive peripheral choroidal atrophy; two small membranes extending diagonally across vitreous in the axis of vision, apparently attached downward and backward to retina on temporal side; small recent hemorrhage in vitreous, just above and behind the lens on nasal side; tension normal; myopia, D. 1. Hypertrophy of left side of heart. Atheroma of arteries at wrist and temple. No renal disease. This patient was under observation only for a brief period of three months, during which time there was scarcely any improvement of vision and no change in fundus.

Case III.—L. S——, aged forty-five; first seen June 25, 1878. Patient resident for many years in Central America, though of German birth. Repeated attacks of con-

three days, and then slow improvement set in. Examination showed: R. E., $\frac{2}{20}$; media clear and fundus healthy except at periphery, where there were signs of beginning choroidal atrophy. L. E., movements of the hand; tension +1; in vitreous one large clot and several floating smaller clots. Emmetropia R. E. No cardiac or renal disease.

Vision in this case improved very slowly. At the end of ten months it was $\frac{5}{200}$, and at the end of two years $\frac{10}{200}$. The vitreous of the L. E. showed a large floating membrane, which was thicker in some places than in others, and was apparently attached both at the equatorial region and at the optic disk.

CASE IV.—S. M. L——, aged forty-six, native of Arkansas; first seen July 17, 1878. Has been subject all her life to congestive chills, but never had any failure of vision till eight months ago, when she suddenly lost the sight of the *left* eye while in one of her attacks. From this she slowly recovered. Four weeks ago, while suffering from an attack of fever, she again lost the sight of *left* eye entirely, and of the *right* eye partially. The *left* eye remained entirely blind for six days, and then vision began slowly to return. An examination showed: R. E., $\frac{20}{200}$; small recent hemorrhage in the vitreous near the retina, and exactly in axis of vision; refraction hypermetropic. L. E., fingers at 6″ eccentrically; large clot in vitreous obscuring entire fundus except at equator. No cardiac or renal lesion. Liver and spleen both enlarged. Choroidal atrophy at periphery. This patient has never had any recurrence of the hemorrhages, and when last seen vision was, in R. E. $\frac{20}{60+}$; L. E., $\frac{5}{200}$, with a somewhat thick membranous band stretching across the centre of the vitreous, which was perforated by several holes, through which the fundus was visible.

CASE V.—C. K——, aged forty-three, steward of steamer; first seen February 14, 1879. For the last twelve years has been subject to congestive chills, which he attributes to an attack of yellow fever which he contracted at Vera Cruz. Has never had any trouble with his vision till ten days ago, when, after a violent chill and equally violent fever, he noticed an obscuration of vision of *left* eye which rapidly grew worse, and on the next morning he could not even see light. Vision began to improve on the sixth day. Examination showed: R. E., $\frac{20}{30}$; media and fundus normal; refraction hypermetropic. L. E., movements of hand; vitreous filled with floating blood-clots. No cardiac or renal disease, but spleen much enlarged.

This patient in the course of seven months had four hemorrhages into the vitreous of the L. E. He was then free from attacks of fever for nearly two years, during which vision in L. E. rose to $\frac{20}{70}$. Then came another hemorrhage entirely filling the vitreous, and when last seen, now some years ago, vision had sunk to $\frac{5}{200}$ in L. E.

CASE VI.—A. M——, aged forty-five, sailor; first seen December 3, 1879. Has had several severe attacks of congestive intermittent fever while in tropical climates, the last being about eight months ago, while on the west coast of Africa. During this last attack he lost the sight of the *right* eye entirely. The loss of sight was sudden and complete within a few minutes. The eye also became bloodshot, and remained so for some weeks. Two weeks ago, while on shipboard, he had another chill followed by high fever, and again lost the sight of the *right* eye, which had partially recovered from the previous attack. Examination showed: R. E., $\frac{5}{200}$; tension normal; no reflex from the fundus except at the extreme periphery; small hemorrhage in the anterior chamber, and the vitreous full of blood. L. E., $\frac{20}{30}$; media and ago, when he contracted congestive chills while in Mexico. For more than a year was unable to do any work. Two months ago, during an attack, vision suddenly failed in the *right* eye, and in about an hour he had only perception of light. Examination showed: R. E., $\frac{20}{70}$; tension normal; numerous small floating clots in the vitreous; choroidal atrophy at the periphery. L. E., $\frac{20}{30+}$; faint opaque striæ at periphery of lens; peripheral choroidal atrophy; refraction emmetropic. No cardiac disease and no renal disease, but liver and spleen somewhat hypertrophied.

June 17, 1881.—Sudden and extensive hemorrhage into the vitreous of *right* eye four days ago, which now seems limited to the nasal half of fundus. V. = $\frac{10}{200}$ eccentrically. This case is one of the very few I have seen in which there has apparently never been any absorption of the extravasated blood. The patient was under observation at very long intervals for nearly five years, and at the last visit the vision of the R. E. was $\frac{10}{200}$, and the blood in the vitreous did not show any change.

CASE VIII.—B. G——, aged forty-three. First seen October 4, 1880. First attack of fever ten years ago, and has never been free from it since. First failure of sight in *left* eye seven months ago, from which she partially recovered. Another attack, accompanied by loss of sight, three months ago, and again a sudden and complete loss of sight eight days ago, from which, however, she has already begun to recover. Examination shows: R. E., $\frac{20}{30}$; media and fundus normal; refraction emmetropic. L. E., $\frac{10}{200}$; blood in the anterior chamber and a large clot in the vitreous. Patient emaciated and very feeble. Heart-sounds faint and circulation very sluggish, but no murmurs and no hypertrophy. Enlarged spleen. No renal disease.

This patient has been seen at long intervals since—the last time in May, 1886. An examination then showed: R. E., $\frac{20}{30}$, with some peripheral choroidal atrophy. L. E., $\frac{10}{200}$; large diaphanous membrane in vitreous; the remains of the old blood-clot, and some floating opacities, still tinged with blood, the remains of more recent hemorrhages. She still suffers from chills and fever.

CASE IX.—M. N——, aged forty-three, clerk; first seen October 25, 1880. Subject to intermittent fever for many years, but has never lost his sight entirely, although he has had attacks of partial failure of vision on several occasions. One week ago had a violent attack of fever, and suddenly noticed a large black spot before the *left* eye, which rapidly grew larger and soon obscured the entire sight. Examination showed: R. E., $\frac{20}{30}$; hazy vitreous, with what was apparently a small blood-clot. L. E., $\frac{1}{200}$ eccentrically, and vitreous filled with blood; faint reflex at extreme periphery. No cardiac or renal disease.

This patient was under observation daily for about three weeks, and then at long intervals for nearly two years, since which time he has not been seen. During the two years he had several slight attacks of loss of sight in L. E. At date of last visit examination showed: R. E., $\frac{20}{30}$. L. E., $\frac{1}{200}$, with both fixed and floating opacities in the vitreous, and a general haziness which obscured most of the fundus.

CASE X.—H. G——, aged sixty-four, captain of a sailing vessel; first seen in February 25, 1882. Has had several attacks of Chagres fever and one of yellow fever, and in all of them had loss of vision, though never complete. Thinks he has never regained the sight of the *right* eye entirely since the attack of Chagres fever nine

heart. This patient was under observation for about five months, during which time there was no apparent absorption of the blood in the vitreous of R. E. He was again seen in April, 1884, and then vision in R. E. had risen to $\frac{20}{200}$, with some floating opacities and one large membraniform opacity attached to disk.

CASE XI.—J. F——, aged fifty-eight, discharged soldier; first seen February 12, 1883. Contracted fever first while in the army during the Civil War, along the Red River. Subsequently was transferred to the Army of the Potomac, and suffered severely in the swamps of the Chickahominy region. Has never lost the vision of either eye entirely, but has had repeated attacks of partial failure of sight, always during a febrile attack. Has had no distinct attack of fever for several years, though he has had chilly feelings. Three days ago, while complaining of a congested feeling in his head, he suddenly and entirely lost the sight of the *left* eye. Examination showed: R. E., $\frac{20}{30+}$; hypermetropic; choroidal atrophy. L. E., perception of light; vitreous filled with blood; no reflex; tension + 1.

Patient has had muscular rheumatism, but has no organic heart disease. Repeated examinations of the urine show a faint trace of albumen but no casts.

Patient last seen in July, 1885. He had had two attacks of hemorrhage into the vitreous since his first visit to me, in both of which I saw him. Vision at last visit: R. E., $\frac{20}{30-}$. L. E., $\frac{15}{200}$; clots and membrane in vitreous.

CASE XII.—B. G——, aged forty-four; first seen March 26, 1883. Subject to repeated attacks of intermittent fever of the regular tertian type for many years. First loss of sight two years ago, in *left* eye, during an attack of fever. Second attack about ten months ago in same eye. Third attack two days ago in same eye. Examination showed: R. E., $\frac{20}{30}$; media clear; fundus normal; refraction emmetropic. L. E., $\frac{1}{200}$ eccentrically, eye slightly divergent; fresh hemorrhage into vitreous, and membranous remains of former hemorrhages. Patient thinks that the divergence of L. E. came on after the second attack of loss of sight ten months ago. This patient is in fairly good condition, in spite of the long continuance of the malarial poison in his system. No cardiac or renal disease. Slight tendency to chronic diarrhœa. No choroidal atrophy. This patient was last seen eight months ago, two years after the last hemorrhage, and the absorption had proceeded so slowly that in L. E. V. = $\frac{10}{200}$, and the details of the fundus were still so indistinct that no exact idea of the condition of the choroid and retina could be obtained.

CASE XIII.—P. McB——, aged forty, carpenter; first seen April 16, 1883. Contracted intermittent fever of a virulent type three years ago, and with the third attack had loss of sight in the *left* eye, from which he says he entirely recovered. After that he had repeated attacks in the same eye, generally slight, and always during or after a febrile attack. The last attack occurred three weeks ago, and was the most severe he had ever had.

Examination shows: R. E., $\frac{20}{30}$. L. E., $\frac{3}{200}$. Media of R. E. clear, but in the L. E. a large floating clot and numerous thin, almost transparent filaments, the remains probably of former hemorrhages. Refraction hypermetropic. No cardiac or renal disease. No apparent enlargement of liver or spleen. Vigorous treatment, persisted in for about four months, succeeded in curing this case as far as the febrile attacks were concerned, and there was no recurrence of the hemorrhage into the vitreous. This patient was seen during the past summer, but vision in the L. E. had only improved to $\frac{15}{200}$, with no distinct view of the fundus.

CASE XIV.—R. S——, aged fifty-six; first seen December 31, 1883. Subject to "congestive chills" for some years, contracted in southwestern Missouri. Has had repeated attacks of partial and transient loss of sight, lasting for a few weeks. Sudden failure of vision in right eye two days ago. Has rather marked yellow complexion, and is very thin.

Examination shows; R. E., $\frac{20}{200}$: faint reflex from fundus; large clot in vitreous. L. E., $\frac{20}{40}$; choroidal atrophy at periphery; small membranous opacities in vitreous. Faint striæ at periphery of both lenses. Refraction, myopic. No cardiac or renal disease. Spleen enlarged. General nutrition depraved. This patient did not recover from the attacks of intermittent fever till the spring of 1885. Between December, 31, 1883, and March 20, 1885, there occurred two hemorrhages into the vitreous. The patient was last seen in November, 1885, when the vision of R. E. was $\frac{8}{200}$, and that of the L. E. was unchanged. The absorption of the blood was very slow.

CASE XV.—M. E——, aged forty-seven; first seen November 16, 1885. Always in feeble health, neuralgic, and dyspeptic, but had never had any symptoms of malarial poisoning until the preceding August, while in a low, swampy region. She was exposed one evening to a wetting, and that night had a violent chill, followed by high fever. The next afternoon the chill was repeated and during the febrile paroxysm she suddenly lost the sight of the *left* eye, and has only recently begun to regain it. Examination showed: R. E., $\frac{20}{30}$; faint opacities at lens peripherally; ash. of D. 1; axis 90°. L. E., perception of light; faint reflex from equatorial region; vitreous filled with blood. This patient has no cardiac or renal disease, and no demonstrable engorgement of either liver or spleen. The menopause has not yet begun. Radial pulse feeble and irregular; complexion muddy.

This patient was last seen in June, 1886. At that time R. E., $\frac{20}{30+}$. L. E., $\frac{10}{200}$; faint signs of choroidal atrophy at periphery of both eyes; absorption of hemorrhage in L. E. proceeding very slowly; fundus entirely indistinct.

CASE XVI.—C. R. F——, aged forty; first seen February 1, 1886. Has had repeated transient loss of sight in one or the other eye, always during a febrile paroxysm, so that, as he said, "he had come to expect it." Subject to severe attacks of intermittent fever, in some of which he was unconscious during a period of about three years. The last attack was one week ago, and was not particularly severe, but was followed by a sudden loss of sight more serious than for a long period.

Examination showed: R. E., $\frac{20}{40}$; small, fixed, and floating opacities in vitreous; choroidal atrophy at periphery. L. E., $\frac{20}{200}$; large clot floating in vitreous; choroidal atrophy. Refraction of R. E. hypermetropic. This patient has no cardiac disease or renal disease demonstrable. Has always been subject to "fever and ague," and the spleen seems slightly enlarged. The blood-current seems feeble, and the general nutrition of the patient much below par. This patient was last seen during the latter part of September, and then vision was unchanged. There did not seem to have been any fresh hemorrhage, and no attempt at absorption had taken place.

CASE XVII.—L. C. G——, aged fifty-two; first seen May 17, 1886. Patient has just arrived from Panama. Has had Chagres fever twice; the second time with loss of sight in *right* eye, four years ago, from which he has never entirely recovered. Three weeks ago, while in the interior, had a violent attack of fever, during which he entirely lost sight of *left* eye. Had to be carried on board the vessel sailing for home. During the voyage there was a slight improvement of the vision.

Examination shows: R. E., $\frac{20}{40}$; a small, long, membranous opacity in vitreous, almost diaphanous, and apparently fixed to retina. L. E., fingers eccentrically at two feet; large floating clots in vitreous, and a general haziness, so that no detail of fundus can be seen. Refraction cannot be estimated, probably hypermetropic. Heart and kidneys apparently normal, but the liver, and especially the spleen, are enlarged. This patient is still under observation; vision in R. E. remains the same, but in the L. E. has increased to $\frac{10}{200}$. Very little absorption of the blood-clot in the vitreous.

to be hoped for owing to the age of the patients, the atrophic choroiditis, and the consequent retardation and incompleteness of the process of absorption. Wecker was the first to recommend the internal administration of an infusion of jaborandi, and subsequently the hypodermatic injection of the salts of pilocarpine, for chronic vitreous opacities, other than hemorrhagic, so frequently met with in inflammations of the uveal tract; and he subsequently advised their employment in the treatment of the remains of hemorrhages into the vitreous. But hypodermatic injections of pilocarpine should always be employed with great care, and the daily dose should be increased very cautiously for fear of the occurrence of collapse from heart-failure. I cannot recall a single case in which the absorptive process was hastened by the use of this remedy in chronic cases, and I have seen some alarming instances of collapse from its employment. I have seen no benefit arise from the use of diuretics or purgatives, even when continued for a long time in small doses largely diluted. The few partially satisfactory results which I have gained in these cases have apparently been due to the strict attention paid to the dietetic and hygienic management of the patient, such as dry massage with a coarse towel or hair gloves twice or oftener during the day, and the ingestion of food that was easily assimilated; systematic daily exercise in the open air when the weather permitted, and abstinence from all use of the eyes for close work. Whenever there was a recurrence of the hemorrhage, rest in bed for a few days and the application of a pressure-bandage for a few hours daily seemed to be indicated, and perhaps succeeded in checking the extravasation. A pressure-bandage, however, is not borne well by these patients for more than a few hours at a time. Much has been claimed for the continuous current in promoting the absorption of these opacities, but in my experience it has completely failed. Le Fort, Onimus, and Giraud-Teulon have reported some remarkable results; but Onimus also states that an ill-timed employment of the continuous current has been known to increase the opacities of the vitreous. He thinks that the centrifugal current is the only one which possesses the power of clearing up these opacities of the vitreous—that is, where the negative electrode is placed upon the closed lids, and the positive electrode behind the ears or at the nape of the neck; and the current should not be passed for more than two or three minutes, for fear of increasing the turbidity of the vitreous. In not a single one of the cases which have come under my own observation was any improvement noted from this method of treatment, though carefully carried out and in every instance followed by an ophthalmoscopic examination.

SUDDEN DEVELOPMENT OF A TALENT.—In a recent work on "The Colloquial Faculty for Languages, Cerebral Localization, and the Nature of Genius," Dr. W. H. Walshe relates an instance of a youth, living in the north of England, who, having previously displayed but feeble, if any, taste for art, suddenly, during a winter spent in Algeria, became a painter. "The luminosity of the atmosphere, the clearly far-lit landscape, the sharp outlines, the deep shadows, the brilliant colorations, the Moorish architecture, the picturesque draperies, unwonted attitudes, gesticulations, and groupings, either solemn or comical, of

THE TREATMENT OF SUBSTANTIVE PHYSEMA.[1]

BY FRANCIS DELAFIELD, M.D.,

NEW YORK.

ON October 21st I read before the Academy of cine a paper on Pulmonary Emphysema, and s with the lantern, sections of emphysematous lur advanced the view that in substantive emphyse have a disease which is, both clinically and anatom entirely different from the other forms of pulmona physema; that with this form of emphysema, a chronic Bright's disease, the condition of the va system is a matter of great importance; and tha stantive emphysema is really a chronic interstitial monia.

Such a view of the nature of the disease is not gether new, for among the best observers we find who have recognized that a mere dilatation of the spaces could not be the whole of the disease.

Thus Rokitansky[2] describes a form of emphys characterized by the production of interstitial connec tissue, and says that the symptoms are due partly to growth of new tissue.

Andral[3] looked upon the condition as one of h hypertrophy and atrophy of the lung-tissue. Louis scribes the dyspnœa as due to an hypertrophy of walls of the air-sacs. Sir William Jenner[4] says that most frequent anatomical change in the lungs is fibr degeneration.

Waters[5] says that there can be no doubt that lob emphysema is a malady resulting from some form of m nutrition of the lung-tissue; that it is of a constitutio nature. He gives altogether the best description substantive emphysema that exists, especially of its cli cal features, and of the cases without cough but with t development of a general cachexia.

But yet it has seemed difficult for anyone to fair admit that there is a special chronic disease of the lun belonging to the class of chronic inflammations, and f which substantive or lobar emphysema is the only nam which we yet have.

In speaking of the treatment of substantive emphy sema, therefore, it will be understood that I exclude th consideration of all other varieties of emphysema, an that it is my object rather to establish a rational basis fo treatment than to recommend new remedies.

Before speaking of the treatment, however, we mus call to mind what is the natural course of the disease.

We find that in some persons the changes in the lungs are developed slowly and gradually, the disease never amounts to more than an inconvenience, and death is due to other causes.

In other persons there are never any marked pulmonary symptoms, but simply a gradual failure of health and strength, with anæmia.

In still others, dyspnœa, asthmatic attacks, bronchitis, and general venous congestion are developed in varying degrees of severity.

In many of the cases chronic endarteritis and the disposition to increased arterial tension exist as complicating conditions.

The conditions which demand treatment in substantive emphysema I should enumerate as follows:

1. The chronic inflammation of the lungs.

it is difficult to stop or control; and that the results of the inflammation, when once effected, are not likely to be changed.

On the other hand, it is to be remembered that, although such lesions exist, it is possible for the general health of the patient to remain good; so that it is well worth our efforts to put such patients under the most favorable conditions. Such conditions seem to be an out-of-door life in a suitable climate, abstinence from alcohol and tobacco, and partial abstinence from sugars and starches.

I have never believed that any drugs have a direct effect upon the structural changes in the lungs when they are once established, although it is very probable that drugs, such as iron and cod-liver oil, by improving the general health, may indirectly delay or modify the progress of the disease of the lung.

From a theoretical point of view, the treatment by compressed air should be that which exerts the most direct effect. For the inspiration of compressed air is said to diminish the quantity of blood in the lungs, and the expiration into rarefied air to increase it; so that by the alternate use of compressed and rarefied air the pulmonary circulation would be made much more active, and such activity might well be followed by a change for the better in the nutrition of the lung-tissues.

Experience, however, has not entirely settled the value of this plan of treatment. While some claim good and permanent results, others have been less successful.

My own attempts in this direction have been with compressed oxygen-gas instead of compressed air. This has seemed to me in some cases to be of real service.

2. *The constant dyspnœa, including the dyspnœa excited by exertion and by indigestion.*—In observing this dyspnœa, one is at once struck by the different ways in which it behaves in different patients. The breathing may be noiseless, or whistling; the movements of the thorax may be exaggerated, or quite natural; the patient may complain bitterly of the need for more air, or he may assert that his breathing does not trouble him at all.

This dyspnœa seems to be due to: (*a*) Anatomical changes in the lung-tissue which impair its functions as the organ of breathing. These changes are a thickening and thinning of the walls of the air-spaces, with more or less dilatation of their cavities; a thickening of the walls of the bronchi, and often a dilatation and congestion of the blood-vessels in the stroma of their mucous membrane. (*b*) Changes in the condition of the walls of the arteries, both in the lungs and in the aortic system—chronic endarteritis, rigidity, and contraction. A good example of this is furnished by those persons who, while suffering from emphysema, chronic endarteritis, and chronic nephritis, yet are in comparative comfort until high arterial tension is developed. Then both pulmonary and renal symptoms make their appearance.

Still further, constant dyspnœa may exist for a long time, and dilatation and hypertrophy of the right ventricle of the heart show that there is an obstruction to the passage of blood through the lungs; and yet, after death we find but little dilatation of the air-spaces, and can make a complete artificial injection of the lungs. This would point to a contraction of the pulmonary vessels which existed during life and disappeared after death.

For the improvement of the anatomical changes in the lungs the methods of treatment already enumerated are indicated. For the condition of the arteries, the drugs which we know by experience diminish increased arterial tension—the iodide of potash, chloral hydrate, belladonna, and opium.

3. *The asthmatic attacks.*—The causes of the attacks of asthma seem to be: (*a*) Spasmodic contraction of the bronchi. This would appear more likely to occur in those cases in which the walls of the bronchi had not been thickened and rendered rigid by chronic inflammatory changes. The remedies are: The inhalation of the fumes of stramonium and the nitrate of potash, and of chloroform and ether; the internal use of emetics, of belladonna, the compound spirits of ether, and opium.

(*b*) Venous congestion of the stroma of the mucous membrane of the bronchi. The condition of the wall of the bronchi after death, in many cases of emphysema, suggests very strongly that their calibre can be suddenly and decidedly diminished during life by congestion of the stroma of the mucous membrane; for the walls of the bronchi are thickened and rigid, and the stroma of the mucous membrane is so filled with large vessels as almost to resemble erectile tissue. To relieve such venous congestion we naturally use the drugs which cause a large and rapid production of mucus from the bronchi, such as lobelia and grindelia robusta; the rapid determination of blood to the surface of the body by dry cups, and the drugs which stimulate the heart, such as caffeine, convallaria, and digitalis.

(*c*) A spasmodic contraction of the smaller branches of the pulmonary artery, a condition similar to the contraction of the smaller arteries of the aortic system which is seen in angina pectoris and in uræmic attacks. To overcome such a contraction we use the remedies which diminish arterial tension—amyl nitrite, chloral hydrate, potassium iodide, and opium.

(*d*) Some emphysematous persons only have asthma when they have an attack of acute bronchitis. In such cases the indication evidently is to treat the bronchitis.

(*e*) There are some persons in whom inflammatory changes in the nose seem to have a large share in producing the attacks of asthma. In such persons, of course, the nose should be properly treated.

4. *The chronic bronchitis.*—This is a very important feature in many cases of emphysema. In many patients it is the symptom which demands treatment more than any other. Like the chronic catarrhal inflammations of other mucous membranes, it exhibits a marked tendency to continue and to relapse; and, like them, it is favorably affected by climate and mode of life rather than by drugs.

5. The establishment of general venous congestion and of loss of nutrition and anæmia.

These conditions, fortunately, are not developed in all cases of emphysema. They mark the worst forms of the disease, the form which is regularly fatal. There is failure, dilatation, and hypertrophy of the right ventricle, sometimes of the left ventricle also. The blood accumulates in the veins and leaves the arteries. The patient becomes feeble, emaciated, dropsical, and anæmic. In such cases we may, perhaps, put off the evil day for a time, but not for very long.

The indications seem to be to use cardiac stimulants—caffeine, convallaria, and digitalis; to improve the nutrition with iron, oxygen, and fats; and to cause the patients to live in the most favorable climates.

HE NEVER ADVERTISED.—"Good-morning, gentlemen," said the doctor, as he walked into the newspaper office, "is the city editor in? Ah, yes, I see. Mr. Huntemup, there was an accident on Fremont Avenue this afternoon that I thought you would like to hear of. Mrs. John Peduncle was thrown out of her carriage and sustained a compound fracture of the right clavicle. She was taken home and medical aid summoned. Her injuries were skilfully attended to, and she is now resting easily. You might say that I was called and have charge of the case." "By the way, doctor," said the advertising manager, looking up from his books, "I would like to insert an advertisement for you in the *Banner*. I'll let you have it a year for $30 an inch, payable——" "Sir," interrupted the doctor, with a scowl, "I never advertise. It is contrary to medical ethics. Good-day,

THE VENEREAL DISEASES OF THE RECTUM AND ANUS.

By CHARLES B. KELSEY, M.D.,

NEW YORK.

THE venereal diseases of the rectum constitute a study which has never yet been mastered by either the syphilographer or the student of diseases of the rectum. Each has contributed a certain amount of information acquired by personal experience, but neither has ever completely covered the whole ground.

The difficulty with the syphilographer in general is that he is not thoroughly familiar with rectal exploration and diagnosis, and with the rectal specialist that he is not an authority on venereal diseases. Many manifestations of syphilis escape the former, because, as a rule, they are out of his field of vision and beyond the reach of his usual examinations; while many are brought to the notice of the latter, not at all because they are venereal but because they cause pain and trouble with the rectum.

For this reason it has seemed to me that a review of the whole subject might be profitable to the general reader, not so much from anything original which it may contain as from a concise statement of what is definitely known and what is still to be learned. The field of observation is one in which every observer's clinical experience is of the highest value, for many of the points which still give rise to debate may easily be settled by a few accurately reported cases. It is in the hope of exciting such observation and clinical report and of pointing out the special points upon which clinical observation is most needed, that the following article is contributed.

The term venereal diseases will be used here in its broadest sense, as including all those affections referable to, or directly caused by, the sexual act, and the number of such is very considerable, for there is scarcely any manifestation of venereal disease capable of affecting the soft tissues which has not at some time been observed in the rectum or anus.

Before considering the various forms in detail, a few words are almost unavoidable as to the modes of their acquirement. Some of them are local, some are the manifestations of a constitutional poison. The local ones may be acquired by accidental contact or by the practice of unnatural sexual vice. However disgusting this last phase of the etiology of venereal disease may be, it cannot be set aside as a matter of ancient history nor utterly disregarded in the practice of medicine of the present day.

For statistics regarding the extent of these unnatural practices we are in great measure dependent upon the French and German writers upon legal medicine. All through French medical literature we find references to sodomy and pæderasty as common crimes, about the existence of which there can be no discussion. Kocher, in his work "De la Criminalité chez les Arabes," begins his chapter on this subject with the concise statement, "Like all the people of the Orient the Arab is a sodomist," and remarks on the special frequency of the habit in those countries where polygamy is allowed, using the apt expression, "moral hermaphrodite," for a man addicted to the practice. He quotes Bertheraud in calling attention to a peculiarity in the dress of the Arabian pæderast. The ample Turkish pantaloons are provided with an opening at the site of the anus, which, together with the stains surrounding it, constitutes valuable legal evidence.

The most important statistics, however, come from France. Martineau[1] says: "The frequency of sodomy is great, as you may judge from the cases seen every day in my service. Since my lectures on this subject in 1881, I say it with regret, deformities of the anus due to this act against nature, have become more and more numerous, proving that these libidinous practices increase from day to day. If I dare express the results of my observations I should say that for many years I had noticed an evident increase in these acts. Saphism, lavage, and sodomy grow in unheard-of proportions." Out of 1,170 observations made during the year 1880 he found 500 cases of vulvar or anal deformities, due to masturbation, saphism, or sodomy.

Tardieu[1] numbers his cases of pæderasty by the hundreds, and classifies them as follows: Passive, 139; active, 32; both active and passive combined, 101; not mentioned, 30. Of these 302 cases 78 were servants, 54 shopkeepers, 16 soldiers, 12 tailors, and 142 others belonged to 60 different trades. As to age, 32 were under 15 years, 88 between 15 and 25, 40 between 25 and 35, 39 between 35 and 45, 35 between 45 and 55, 6 between 55 and 65, 5 between 65 and 70, and 57 not mentioned.

These figures may be open to criticism, as may the statements of Martineau, on the ground that both believe so implicitly in the physical changes supposed to result from the habit that they may have argued backward from certain appearances of the anus to the existence of the vice, and in some cases the inference may not have been correct.

A few words as to the exact uses of terms. Sodomy is a general term for all forms of unnatural intercourse, regardless of the sex of the parties. It is also applied to intercourse between the human race of either sex and the lower animals, and in current literature has too general an application to convey any definite idea of the particular form of vice indulged in. In its more correct and limited application it refers to the act of sexual intercourse *per rectum*, where the passive party is a woman and the active a man.

Pæderasty, properly defined, is rectal intercourse where both parties are males. The Greek παις signifies a youth, and not necessarily a boy; but in modern literature the word is applied only to males, and without regard to age. The terms active and passive, as applied to pæderasts, sufficiently explain themselves.

Buggery, sometimes used synonymously with sodomy, means properly, sexual intercourse with one of the lower animals. It is derived from the French *Bougre*, the name of a religious sect in Eastern Europe—the Bulgarians—but is not held as any imputation against their practices. Of this vice there are many forms, some of them of direct interest in this study, and others not.

Greek-love is another name for pæderasty, the practice having come into Greece from the older civilization of the East.

Besides these practices there is one other—rectal masturbation—which is of direct interest in causing the lesions about to be described.

The existence of these habits is explained by the physiological fact that a certain degree of sexual orgasm may be excited in either sex by the irritation of the rectum and anus. It may be safely assumed that no man would give himself up habitually to be the passive party in this practice unless such were the case. The habit of rectal masturbation (the irritation of the anus and rectum by the introduction of foreign bodies such as bottles, candles, or sticks of wood, can only be accounted for in this way. There are, moreover, some clinical observations which seem to indicate that the capability of producing an orgasm in this way may outlast the natural sexual power. The men addicted to rectal masturbation are generally old and sexually incompetent.

The following case, reported by myself at a recent meeting of the Clinical Society, is one in point.

A man in the middle class of life, the steward of a steamboat, forty-five years of age, fat, round, and flabby, consulted me about an occasional loss of blood and considerable pain during and after defecation. The most careful examination failed to detect any lesion, both anus and rectum seeming perfectly normal. After prolonged

[1] Leçons sur les Déformations vulvaires et anales, etc.

[1] Étude Médico-légale sur les Attentats aux Mœurs, 1878.

questioning I was about to give up the diagnosis in despair, when the patient, seeing my evident perplexity, suggested that perhaps he ought to tell me one thing. It was this: He had practised masturbation during the early years of his life, but about fifteen years ago he had begun the practice of passive pæderasty, and had continued it steadily ever since. For some time he had noticed that each indulgence was followed by pain and hemorrhage. What he really wanted to know was whether he had received any physical injury or acquired any venereal disease. He was a married man, but without active sexual power.[1]

The voluntary practice of these vices being thus accounted for, there still remain many cases in which their existence is to be explained in other ways. Male children and physically weak male adults have not infrequently been made the passive parties by force and violence. Many women submit to it from love of gain, and others, when married, because forced to do so by the unnatural demands of the husband. The fear of pregnancy, vaginismus, imperforate hymen, or any painful disease of the vagina may account for the practice. But these explanations are by no means sufficient to account for all cases, for Martineau refers to the fact that in certain countries of Europe, Asia, and Africa young girls, from the age of eight upward, give themselves freely to anal intercourse, because the shame of this habit is less than that which would attach to the fact of having lost their virginity, when they came to be married.

There are many points at which this subject comes within the field of the alienist and neurologist, rather than that of the surgeon. It is easier to understand why a man or woman should submit to rectal intercourse, than why a man should practise sodomy upon a woman, often his wife. That the sexual appetite is capable of almost every conceivable perversion, history only too clearly proves.

As to the existence and extent of these practices in this country, but little is known and less has been written. This very ignorance on the part of physicians, and lack of medical literature on the subject, go far to prove that the vice cannot have reached any such proportions here as must be the case in France, to justify Martineau's statement that, although the practice is particularly common among prostitutes, it is no necessary part of their profession, and that he sees much of it among women whose social habits and standing remove them from all suspicion of unnatural practices, and in cases where, unless the physician has made an attentive study of anal deformities, he is liable to misconstrue the origin of the local and general symptoms which depend on the act.

Sodomy here must be sought for among prostitutes, and pæderasty where bodies of men and boys are banded together and separated from the opposite sex for a long time, as on board ship.

The French writers describe in detail the changes, malformations, and diseases of the rectum and anus produced by this practice, and it is on account of these only that this subject has been introduced. It is a well-attested fact that all of the supposed physical signs of the vice may be absent in those who have practised it for years. The case reported by myself is one in point, and Kocher calls especial attention to the fact that among the Arab pæderasts all of these signs are generally absent. Ligg[2] describes a deaf-mute, thirty-five or forty years old, the victim of this habit, whose anus showed no trace of traumatism, and was well closed, being marked only by an absence of the radiating folds. The mucous membrane of the rectum was also normal.

Although there is a perfectly normal type of anus, the changes which may be found in it without indicating disease can hardly be tolerated by the index-finger. In some patients the radiating folds of skin are very strongly marked, while in others they are entirely absent; and the depth of the anal depression varies most strikingly in different people.

The changes which unnatural intercourse is supposed to produce are relaxation of the sphincter, disappearance of the radiating folds, and an infundibuliform shape of the anus, together with, in more marked cases, fissures, lacerations, abrasions, ecchymoses, ulceration abscess, hemorrhoids, fistulæ, and incontinence. There is no doubt but that all of them may be produced in this way, but only under extreme conditions. It certainly would lead to error, however, to infer the existence of an unnatural practice from a lax sphincter or an absence of radiating folds in every case, or even in the majority of cases. In studying these changes, and their value in diagnosis, it will be safer to admit that although the prolonged practice of the vice may certainly cause them to appear, they may still all be absent in old cases; and their mere presence will seldom constitute proof of the practice without additional evidence, usually only to be obtained from the confession of the patient.

The physical signs which indicate this vice are of two kinds—those due to physical violence and those due to direct contagion of venereal poison. The former will vary according to the age of the passive party, the tightness of the sphincter, the size of the male organ, the amount of violence used, etc., and also according to the frequency of the act. In a young child, and sometimes in an adult, the injury may amount to actual laceration, and may be attended by profuse hemorrhage in consequence; but it is more apt to show itself in abrasions, bruising of the parts, and ecchymoses. These injuries may be followed by abscess, and hence by resulting fistulæ. A case of ischio-rectal abscess was called to my attention not long since, supposed to be caused in this way, and, at all events, occurring in a confessed pæderast. In less marked cases a single act may be followed by pain in the rectum, increased by defecation, tenderness to the touch, slight erosions, and, perhaps, by a slight sero-sanguinolent or mucous discharge. In cases of long-continued practice, where marked changes have been caused, the physical signs are of a different character. Tardieu illustrates his work with a plate of a patulous anus, in which the sphincter is entirely paralyzed, and Burgeon[3] describes the rectum of an idiot, who for a considerable time had practised the vice, as much dilated and infundibuliform in shape, the mucous membrane being blackish, swollen, and ulcerated in spots, and the submucous and muscular layers hypertrophied to four or five lines in thickness. In such cases there will be incontinence of gas and fæces, fistulæ, and, perhaps, stricture following the ulceration.

With regard to the diagnosis in these cases it will be seen that none of the signs enumerated are absolutely diagnostic, though they may be sufficiently so to excite the strongest suspicion. Pæderasts are said to recognize each other almost invariably, and certain general characteristics are said to be common among them, such as an affectation of femininity, the use of perfumes, wearing of jewelry, a mincing gait, curled locks, exposed neck, etc.; but about the only absolute proof of the habit when it is denied by the criminal is the finding of spermatozoa either on the mucous membrane of the rectum or in the discharge from it.

The injuries caused by the practice of rectal masturbation are often much more severe than those due to sodomy or pæderasty. It is this secret vice which lies at the bottom of all the remarkable cases of foreign bodies found in the rectum, generally of old men who have lost natural power. A bottle in the rectum explains itself.

One reason for the fatality of these cases is found in the length of time the true condition will be concealed by the patient before his shame allows him to seek medical relief; and another is that in the futile attempts to remove the body made by the patient it is generally pushed farther up, or if friable is broken.

It is not my intention to deal any more fully with this very interesting surgical point at this time. In another place I have collected many of these cases,[1] and have indicated the course of treatment to be followed. Suffice it to say that their treatment requires often the greatest surgical skill, and that fatal results are not infrequent.

Leaving, with this brief outline, the physical changes which may result from these practices, we come to the other venereal diseases of the rectum and anus which may be caused by them or in other ways.

Proctitis, due to sodomy or pæderasty, may be either simple or gonorrhœal. The former is due to mechanical violence, and its presence without palpable cause, and associated with an eroded condition of the anus, is sufficient to excite a suspicion of the vice. The symptoms are a sensation of heat and weight in the part, a frequent desire to go to stool, more or less pain, often extending to the bladder, sacrum, and loins, and causing vesical tenesmus and a discharge of sero-purulent matter with the passages and between them.

With these local symptoms there may be more or less fever and loss of appetite, and an examination will reveal local rise in temperature and a congested state of the mucous membrane.

True gonorrhœa of the rectum, arising either from direct contagion or by inoculation with pus flowing from the vagina over the anus, is very rare. Rollett[2] reports a case due to direct inoculation from the penis to the rectum in a patient who was in the habit of introducing his finger into the bowel to provoke a passage.

Tardieu has never observed a case, and Gosselin[3] saw only one at Lourcine in three years.

In some experiments made by Bonière,[4] he found it very difficult to inoculate the rectal mucous membrane with gonorrhœal pus placed upon it through a tube, though the anus was easily affected. On the other hand, Requin[5] believes it almost sure to follow passive pæderasty with a person suffering from the disease.

Individual cases will occasionally be seen reported, and most of the standard writers acknowledge its existence.[6] In my own practice I have never had occasion to suspect its existence but once, and then I could not be positive; the patient—a woman—denying any unnatural intercourse, and there being another explanation of the condition equally good.

The diagnosis must rest rather upon the confession of the patient, the existence of the deformities which point to unnatural intercourse, and the severity of the inflammation. In gonorrhœal proctitis all the symptoms will be more severe and acute than in any of the simple varieties. The pain is more severe, the discharge very abundant and greenish in character, escaping with the stools and also by itself; the finger introduced will at once detect the increased heat of the part, and a speculum examination will show intense redness and congestion. The mucous membrane is covered with thick discharge, bleeds readily when touched, and the follicles are enlarged and discharge pus. Although a very severe proctitis may be caused by other causes than gonorrhœa, such, for instance, as the prolonged use of drastic purgatives, the history of the development of the disease will be much more chronic.

The irritating discharge from the anus may cause erosions and fissures, or previously existing fissures may become inoculated with gonorrhœal pus and spread in superficial extent. The inflammation of the mucous membrane of the rectum may be so severe as to end in ulceration and loss of tissue.

The treatment consists in rest in bed, hot sitz baths, anodyne injections of warm starch-water and opium, and perhaps of a solution of nitrate of silver (1 or 2 grs. to ℥ j.). The diet should be of milk and fluids, and the bowels should be kept gently acting with salines. By this means a cure may generally be effected in a fortnight or three weeks.

Chancroids at the anus may be caused by direct contagion or by auto-inoculation, and though they may be due to unnatural intercourse their presence is no proof in itself of the vice. They are much more common in females than males, constituting one in nine of all cases of chancroids in the former, and only one in four hundred and forty-five in the latter. To account for this disproportionate relative frequency it is only necessary to remember the possibility of accidental contact of the male organ in coition, and the facility of auto-inoculation due to the proximity of the rectum and vagina.

They may be single or multiple, may be situated at any point of the anal circumference, and may cover a large extent of surface. They often extend upward between the radiating folds of skin, and thus greatly resemble simple fissures; or they may spread backward into the fold between the nates, following in extent the natural course of the discharge; but they do not tend to spread upward into the rectum, or to involve the surface of the gut above the line of the sphincter. When they do so, which is rarely, they are of limited extent and well circumscribed. Their existence in the rectum proper has been denied by good observers, the mucous membrane there being believed to furnish no suitable ground for their inoculation.

These sores at the margin of the anus have the same general characteristics as when located in other parts. The base is soft, and covered with the same grayish pellicle, the edges are sharply punched, and the secretion is profuse. They tend to spontaneous cure with cleanliness, or with judicious cauterization, and are not very painful unless they are within the grasp of the sphincter, when they may cause the usual pain of fissure. Even when they have extended upward in this way they still heal kindly, and almost spontaneously, and no matter how completely they may have involved the anus or the surrounding skin, they seldom, when healed, leave any traces of their former existence.

In certain rare cases they may be accompanied by an undue amount of ulceration, known as phagedæna; and in certain patients with other rectal disease, or in whom the scrofulous or syphilitic taint is marked, they may assume a chronic type, and the healing be delayed for a long time; but even then they may generally be induced to heal with proper care.

From this general description it is evident that only under very exceptional circumstances will a chancroid, even when phagedenic, extend far enough into the rectum, and cause sufficient destruction, and subsequent cicatrization and fibroid deposit, to result in stricture. That it may do so we are almost forced to believe from the testimony of others; but it is none the less a clinical fact that it seldom does do so, as all those having large experience with venereal sores will testify.

Ulceration of the rectum, in my experience and that of others who have devoted special attention to the diseases of the rectum, *begins within the rectum proper*, well above the sphincter, and not at the skin of the anus, except in some rare cases of lupus, tubercular disease, and rodent ulcer. In the old cases of syphilitic stricture of the rectum, in which the anus is surrounded by tags of hypertrophied skin with ulcers between them extending upward into the gut, we have no proof whether the ulcers were present before the stricture or resulted from the stricture. The cases are always too old, the conditions

[1] Kelsey: Diseases of the Rectum and Anus. New York: Wm. Wood & Co. Poulet: Foreign Bodies in Surgery. New York: Wm. Wood & Co.
[2] Dict. Enc. des Sci. Méd., article, Rectum.
[3] Arch. Gén. de Méd., 1854.
[4] Récherches Nouvelles sur la Blennorrhagie, Arch. Gén. de Méd., April, 1874.
[5] Eléments de Path. Méd., t. i., p. 729.
[6] Thiery. Presse Méd. Belge, No. 26, 1882; Dunmire, Philadelphia Medical Times, vol. xii.; Bumstead and Taylor; Vidal.

too complicated, and the history too confused and imperfect for a positive opinion on this point. In any case of stricture of the rectum, venereal or not, there is generally ulceration below and above, and most frequently a circle of hypertrophied tags of skin around the anus, the adjacent surfaces of which are eroded and ulcerated. To assert that these ulcers are the original cause of the stricture is to assert what has never been proved, and what it is obviously impossible to prove without very careful and prolonged observation of individual cases.

Gosselin is usually quoted as the authority for the idea that chancroid of the anus is the most frequent cause of ulceration, and of the so-called syphilitic stricture of the rectum. It is rather difficult to tell exactly what Gosselin did mean in his much-quoted contribution to this subject, but there seems very little ground for supposing that he intended to convey this idea. Although Bassereau had made the distinction between chancre and chancroid two years before, Gosselin's "chancre" still meant to him, indiscriminately, the hard chancre, the chancroid, and the mucous patch inoculated by the chancroid. What he asserts is, that these strictures are neither primary, secondary, nor tertiary manifestations of syphilis, as such are generally understood, but something developed in the neighborhood of the primary sore, comparable to hypertrophy of the labia or condylomata following the primary lesion. They are "due to a special modification of the vitality of the tissues contaminated by the virus of the chancre, comparable to the lengthening and hypertrophy of the prepuce with contraction of its orifice which follows a chancre on its under surface, in which the disease is evidently neither an œdema, nor a specific induration, nor a constitutional affection, but a local lesion, due to the presence of the chancres, and consecutive to the inflammation which they have caused."

This opinion can certainly be made to teach the chancroidal nature of the affection only by a considerable exercise of the imagination. Nor can very much be said for the theory itself, except that it seems to be rather a doubtful way of accounting for a condition of doubtful etiology, and one which has never been accepted by the profession.

Dr. Mason's [1] paper is very much stronger than Gosselin's, in that he plainly asserts the causation of stricture to be the phagedenic chancroid. He says he has seen "constriction of the rectum follow, and that very *shortly after* the healing of chancroids has taken place." Van Buren says: "I have also seen chancroids at the anus become phagedenic and extend within the rectum, and have verified, at a later period, the existence of stricture of the rectum from the cicatrization, as there was every reason to believe, of this same ulceration."

Bumstead and Taylor speak in the same way, and Mollière says "Nevertheless, the soft chancre of the rectum does exist, and has even been seen to assume frightful proportions in this deep region." Bridge's [2] case is much relied upon to prove this point, though it is open to grave criticism. The woman had both stricture and ulceration at the time the case was first seen, and there is no positive proof that the ulceration was chancroidal and not syphilitic.

The weight of evidence is thus seen to be decidedly in favor of the possibility of the causation of stricture by phagedenic chancroid, but that any large proportion of venereal strictures are caused in this way certainly cannot be accepted, and this is one of the points upon which further clinical evidence is especially desirable.

The diagnosis of the chancroid in this location will be easy by auto-inoculation, if the probability of its occurrence is only borne in mind, and the treatment has been is necessary when the sore does not extend beyond the radiating folds.

There are two forms of phagedæna which may complicate a chancroid at the anus—the acute and chronic. The former is rare, and strongly resembles phlegmonous erysipelas following a wound, in that it may involve the tissues to a great extent, cause deep collections of pus and destruction of tissue, and end fatally. The chronic is the one generally seen, and this may go on for a long time, healing in one spot while advancing in another. It is worthy of note that even after months of this process the sore still remains auto-inoculable.

There are other complications of the chancroid which may render the diagnosis difficult. The sore may itself be inoculated with syphilitic virus and assume some of the characters of the hard chancre, especially the induration. In such a case the diagnosis must rest in a great measure upon the combination of symptoms. The sore will present the appearance of the chancre, but the discharge will be more abundant than a chancre generally produces, and the pus will still be auto-inoculable. In addition, the glands in the groins will show the characteristic syphilitic induration.

Mollière has pointed out that the combination of hemorrhoids and anal chancroid may cause certain peculiarities in the course of the latter. The sore may, after a time, lose its auto-inoculability, but still refuse to heal, the surface becomes red and vascular, the discharge sanious, and the sore is changed into a veritable varicose ulcer.

In the treatment of chancroids of the anus many points of difficulty may arise. The sore, from its position within the grasp of the sphincter, may be so painful that nothing can be done to it except by the surgeon himself, and only then by the exercise of the greatest care and gentleness of manipulation; and although this pain may be at once relieved either by incising the ulcer or dilating the anus, both of these procedures involve a great risk to the patient of auto-inoculation. The bowels should, therefore, be kept gently open by the daily administration of a laxative which will cause soft but not watery passages. The ulcer must be touched two or three times daily with a weak solution of nitrate of silver (grs. v. – ʒ j.) on a camel's-hair brush, and subsequently covered with a small pledget of soft lint, gently laid into the fissure and pressed down with a probe. With a light touch this may be done without causing pain.

Should the ulcer have extended upward to the upper edge of the sphincter, there may be such contraction of the muscle that this plan of treatment is impracticable, because all parts of the sore cannot be reached by the brush. In such a case ether or cocaine must be resorted to, a speculum introduced, until every part of the ulcer is exposed, and the surface thoroughly cauterized with fuming nitric acid. The acid must be carried under the edges of the ulcer, and every point must be thoroughly destroyed, for the operation will be positively injurious unless thoroughly done.

Should the ulcer have reached such an extent of rectal surface as to render it doubtful whether by any means of exposure every point of it can be fully seen, it is better not to try cauterization, but to be satisfied with astringent injections frequently repeated. These must also be made either by the surgeon or a thoroughly well-trained and skilful assistant, for no fresh wounds must be made by the point of the syringe, and no pain need be caused by its passage. A small glass point or a small soft-rubber catheter must be gently introduced on the side opposite the ulcer, and about four ounces of water thrown up and passed out to clean the surface of the sore. This should be followed by about three ounces of a solution of nitrate of silver (grs. ij.– ʒ j.) and this application should be repeated at

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application of calomel or iodoform in powde
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tween the warts and healthy parts, to avoid fur
contamination. Should the growths not yield r
this treatment, they may be freely destroyed by a
One point of great interest in connection with
syphilitic condylomata is that they very closely rese
(so closely that to distinguish between them by gross
pearances may be impossible) another variety of wa
growth, which is often seen in the same place, but ha
nothing to do with syphilis, and may be entirely indepen-
dent of any venereal disease whatever. Formerly all of
these vegetations were considered proof positive of syph-
ilis, and indeed of sodomy or pæderasty. Mollière re-
lates how, at the time of Dionysius, there was a special
hospital at Rome for the treatment of these growths; and
Dionysius himself tells how the surgeons spared neither
the iron nor the fire, and were not moved to pity by the
cries of the patients, inasmuch as this disease was the re-
sult of unnatural intercourse between man and man.

The same false idea has not yet passed entirely away, but
the independence of these growths upon syphilis is beyond
question, except to the extent that any syphilitic sore in
this neighborhood may, by the irritation of its discharge,
cause their development. They owe their growth, in the
first place, as pointed out by Diday, to a special predis-
position to the formation of warts on various parts of the
body in the individual, and this predisposition is assisted
by the presence of any irritation of the part. Thus the
discharge from a gonorrhœa, or a leucorrhœa, or any dis-
ease of the rectum or genitals, may cause them to grow,
and they may appear in persons apparently perfectly
healthy and cleanly. Pregnancy has an undoubted in-
fluence upon their production, and in such cases they
may disappear spontaneously after delivery.

These non-syphilitic warts may appear at any age from
infancy to adult life, though they generally belong to the
latter period. They may vary in size from a single en-
larged papilla at the verge of the anus to a mass weigh-
ing a pound or more. When they grow from one side of
the gluteal cleft, and are large enough to press with their
moist surface upon the corresponding opposite point, a
second patch may be developed at the point of contact.
Their development may be slow or rapid, and when of
large size the patient is constantly troubled by the pres-
ence of the mass, by the sanious and foul-smelling dis-
charge, and by the fresh erosions and superficial ulcers
in the adjacent parts. Great pain in defecation may be
caused by a small wart located just at the verge of the
anus, and such a little tumor may give rise to
characteristic symptoms of a painful fissure,
slight discharge and an occasional drop
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may be so profuse as to escape from the anus between the acts of defecation and cause much suffering from pruritus and tenesmus.

On examination in such a case the mucous membrane will be found dry and glistening as a rule, though there is sometimes more or less extensive proctitis; and the little, tender, warty excrescence which is the cause of all the symptoms and of so much suffering may escape notice. The only treatment for this condition is the ablation of the tumors, with the mucous membrane to which they are attached. They may return several times after removal.

As has been said, these warts are most often mistaken for syphilitic condylomata, and the diagnosis may only be possible by the history and the absence of any other signs of syphilis. Under the microscope the structure is not the same, the non-syphilitic wart being an hypertrophy of the rete Malpighii, and the other an hypertrophy and branching of the papillæ.

The most satisfactory way of curing these vegetations is by paring them off with knife or scissors. They may be ligatured or destroyed by acid, but the former plan will cause the least trouble. They may also be made to dry up by applications of alum or tannin in powder, or by frequent washing with Labarraque's solution.

There is still another form of new growth around the anus which is generally called condyloma, though improperly, and for no particular reason. In fact, the word condyloma has been applied to so many totally different varieties of growth here that the word has come to have no definite signification. It would be much better could it be limited to the syphilitic mucous patch. The growths now referred to are composed of skin and connective tissue, they are attached by a broad base to the verge of the anus, are pinkish in color, soft, fleshy, and irregular in shape, flattened against each other where two come in contact, and often excoriated on the anal surface, and, therefore, giving out a slight secretion. These generally arise from one of the radiating folds of the anus, and consist of an hypertrophy of the whole thickness of the skin. Their size varies from a pea to that of the end of the thumb, and they may be single or multiple. They are the result of a localized chronic inflammation of the skin of the anus, arising from any source of irritation. They are seen typically developed in cases of stricture and ulceration of the rectum, and are due to the irritation of the discharge flowing over the anus. Such a cutaneous hypertrophy may not only be excoriated but ulcerated, and it may even suppurate, but it is generally more annoying than painful, the discharge from its surfaces keeping up a continuous irritation of the adjacent skin.

Paget has said that without considering these growths as absolutely and always syphilitic, they are so rare without it that he had never seen a case.[1] I confess that this statement from such an authority has always been utterly incomprehensible to me. That they are often seen in connection with syphilitic stricture of the rectum is undoubtedly true, and it is also true that in these cases they will sometimes atrophy under the use of iodide of potassium. But they are also found associated with non-syphilitic strictures, and, indeed, with any ulcerative disease of the gut which causes an irritating discharge.

These tumors occasionally reach a large size. Barnes[2] has reported one the size of an orange which protruded from the anus during labor. It proved to be a dense growth attached to the margin of the anus, the rest of the anal circumference being surrounded by piles more or less indurated. At one point the tumor was greenish, as if about to sphacelate. Goodhart reported it as composed for the most part of loöse, fibro-cellular tissue, covered by tough and altered mucous membrane; the deep parts were, however, cavernous in structure. He was of opinion that it originated in a chronic overgrowth of connective tissue round a pili.

[1] Med. Times and Gaz., vol. i., 1865, p. 279.
[2] Brit. Med. Jour., April 12, 1879.

Do mucous patches ever occur within the rectal pouch? From analogy with the fauces alone it would probably be safe to answer in the affirmative; but this is one of the points on which clinical evidence is especially to be desired. Mollière[1] is the only observer with whom I am acquainted who has reported such a case. He describes a white, pearly, rounded plaque, in a subject evidently syphilitic, about one centimetre in diameter and five centimetres above the anus.

It is known that any ulcerative lesion, often of a very trifling nature originally, may, in the rectum, under the influence of the irritation of the fæces, assume considerable proportions; and it has been assumed rather than proved that a mucous patch in the rectal pouch may in this way become the cause of destructive ulceration, subsequent cicatrization, and hence of stricture, so called syphilitic. There is no clinical proof of this, as far as my reading goes, nor are we forced to accept such theory, however probable and plausible it may be, to account for the strictures and ulcerations of the rectum which arise during the secondary stage of syphilis.

At this point we have to leave this question, with others, for future accurate clinical observation, only observing that, as Mollière points out, at no other part of the body are mucous patches followed by retracting cicatrices.

Of the existence of syphilitic ulceration of the rectal pouch, occurring in the late secondary or early tertiary stage of the disease, there can be no more doubt than of the existence of the same condition in the fauces and tracheæ, where it is more easily discoverable, and hence has been more often described. The ulcer is due to the deposit of syphilitic tubercle in the mucous membrane, which rapidly comes to the surface, disintegrates, and leaves a small, well-marked loss of substance, with clearly cut edges and yellowish purulent base. When these ulcers coalesce there is sometimes great destruction of tissue, and large cicatrices follow their healing. Their favorite seat is the lower part of the rectum, and when found in great numbers they will gradually decrease in frequency as the bowel is followed upward.

This form of ulceration has been long recognized and has been thoroughly described, but better studied on the *post-mortem* table than in the consulting-room. Curling[2] describes a case presented by the late Mr. Avery at a meeting of the London Pathological Society,[3] the history of which clearly shows the connection of the lesion with syphilis. "Immediately within the anus, which was surrounded by a circle of vegetations, the ulcer commenced, extending three inches upward, and occupying the whole of the internal surface of the rectum to that extent. The edges were rough and uneven above, and below soft and rounded; the whole surface was smooth, exhibiting the muscular fibre of the intestine quite bare. When she died she had numerous indelible marks of syphilitic eruptions on the limbs and trunk, and was suffering from sore throat."

Paget,[4] also, has given a clear description of the disease, with the points in differential diagnosis between it and tubercular ulceration. He says: "The whole mucous membrane is destroyed except one small patch, which is thickened and opaque. The exposed submucous surface has a lowly tuberculated, undulating, uneven appearance, and is thickened by infiltration. In the early stages the tissue is soft, as if from recent inflammatory effusion or œdema; but as the infiltration organizes it hardens, becomes callous, with fusion of the mucous and submucous coats, and then contracts, and thus brings about the stricture. The affection commonly extends from the anus, as if by continuity with the excrescence (condyloma), to about five inches up the rectum; but it is rarely so marked in the first inch of the rectum as it is higher up."

[1] P. 641. [2] Diseases of the Rectum, p. 112.
[3] Trans. Path. Soc., vol. i., p. 94.
[4] Med. Times and Gaz., 1865, vol. i., p. 279.

"These ulcers were limited to the large intestine, and decrease in size and number from the rectum upward, conditions which, I think, are never observed in the tubercular disease. There is not a trace of tubercle, *i.e.*, of circumscribed, crude, or softening tuberculous deposit, in the submucous or any other tissue of the intestine; none in a Peyer's patch, or at the base or edge of any ulcer. The shape and other characteristics of the ulcers are quite unlike those of intestinal tuberculosis; they are regular, with sharp, even, well-defined edges; with level bases; they are not excavating, nor do they extend through the submucous tissue; their edges are nowhere eroded or undermined, sinuous, thickened, brawny, or infiltrated; the subjacent and intervening structures appear healthy, except at the rectum. These ulcers are not grouped, and where by extension or coalescence they have lost their first shapes, they have acquired one altogether irregular, and have in no instance even tended toward that girdle-like shape, encircling the canal of the intestine, which is so characteristic in the large coalesced tuberculous ulcer. Thus by negative as well as positive characters these ulcers are clearly distinguished from the tuberculous, and, as I have said, there is no no other form of intestinal ulcer to which they bear even a remote resemblance."

The amount of stenosis in these cases varies considerably. In some it is only such as is caused by the thickening of the surrounding structures, in others extensive cicatricial contraction will be found superadded, and with it the results of stricture of the rectum.

This form of ulceration is, to my mind, entirely independent of any venereal lesion at the anus which may extend into the rectal pouch. It is syphilitic, and it belongs to a late stage of syphilis. It is, moreover, syphilitic ulceration of the rectum, and not of the anus, and it begins an inch or more above the external sphincter. While some observers have sought to establish that syphilitic stricture of the rectum was not syphilitic but chancroidal, and that it was due to an extension of an ulcer from the verge of the anus, the existence of this form of disease has not been denied, and it is to it that a certain number of syphilitic strictures are, I believe, to be attributed. This, of course, is in direct opposition to the views of Gosselin and Mason; but those views have never been to any extent accepted, even by syphilographers, while those who have studied the disease from the stand-point of the rectum are unanimous in rejecting them. Cases similar to the following are not very rare in the practice of those who devote much attention to the rectum.

Male, aged thirty-one, single; has been under anti-syphilitic treatment at the Hot Springs for some time back, and was sent from there to me. Gives full syphilitic history, and has some brain symptoms, relieved by specific treatment. For past eighteen months has had symptoms of ulceration of the rectum, the usual diarrhœa, with mucous and bloody discharge, etc. Two weeks before coming to me two ulcers were found in the rectum, above the sphincters, and were cauterized, with relief to pain. On examination under ether, and with the anus well dilated, I discovered three separate and well-marked spots of ulceration about two inches within the anus. One was posterior over the tip of the coccyx, the other two were on opposite sides of the median line in front. The ulcers were raised and distinct to the touch from the exudation under and around them; the edges were distinctly marked, though not much indurated, and the bases a bright red, and bleeding easily when touched.

The treatment was entirely local, as the thorough course of mercurials already given evidently had not accomplished anything, though giving much relief to the other signs of syphilis. The ulcers were thoroughly cauterized with nitric acid, and subsequently treated by local applications of bismuth and iodoform, while the patient was confined to bed on absolute milk diet. In one month all rectal symptoms had disappeared. Six months later the patient still continued well in the rectum, but had a decided return of the brain trouble, for which he again visited the Hot Springs.

For the past two years I have had under observation a case which illustrates very perfectly this form of disease in its more advanced stages.

The patient is an intelligent physician, aged thirty-eight. He has a full syphilitic history, and various indisputable scars of the disease. Twelve years ago, while suffering from a tubercular syphilide, he first began to have the usual symptoms of ulceration of the rectum, and for this he had been under treatment for ten years before I saw him. On examination the lower four inches of the rectum, beginning within the anus and extending upward, was found ulcerated in its entire circumference, and in addition there was a free growth of fungoid granulation-tissue covering much of the surface. The wall of the bowel was inelastic and thickened, but there was very little contraction, and no stricture except what came from the partial closure of the calibre of the bowel by the fungous growth. The anus was partly surrounded by fleshy excrescences, and some of these were slightly excoriated on their anal surfaces, but the ulceration proper did not begin till the sphincter had been passed. Anti-syphilitic treatment had never been of the least value for this condition.

At this time I strongly recommended the administration of ether, the thorough scraping of the diseased surface with a sharp spoon, and free application of strong acid to at least a part of the surface; this to be followed by the usual local and general treatment for rectal ulceration. But circumstances rendered this plan unavailable, and the patient disappeared for eighteen months. At the end ot that time I again examined him, and found unmistakable stricture at two inches above the sphincter. The stricture presented all the characteristics usual in such cases, was of considerable extent, and admitted only a No. 8 bougie. This for a time was treated by dilatation.

This, to me, is a perfect example of late syphilitic ulceration beginning within the rectal pouch, and going on to the formation of stricture.

It will be noticed that in this case the anus was surrounded by fleshy excrescences, and that these were excoriated on the anal aspect. The presence of such tags is not to my own mind a proof of the syphilitic nature of the disease above, any more than is the excoriation upon and between them the starting-point and origin of the ulceration within the rectum. Both the excrescences and the excoriations are explained by the irritating qualities of the discharge from the ulcerative process above, and will be found equally in tubercular or cancerous disease.

This and one other are the diseased processes which explain the fact that in about fifty per cent. of all strictures, not malignant, there is a full history of constitutional syphilis. Such a fact would not be disregarded in the study of the etiology of any other morbid process, nor should it be in this. If one-half of all non-malignant strictures occur in syphilitic patients, it is only fair to assume that syphilis has some causative influence.

In the differential diagnosis of syphilitic from other forms of ulceration the history is of great importance. The appearance of the sore is scarcely characteristic enough to warrant a positive diagnosis unless all the facts of the case point in one direction, and the failure of anti-syphilitic medication is of no negative value, for the late manifestations of syphilis in the rectum often refuse to respond to either mercury or iodide of potash, though both should always be tried. Traumatism, whether surgical or other, and dysentery may both be easily eliminated, and the only remaining sore at all resembling the syphilitic ulcer is the tubercular one. The diagnosis between these two may be impossible where only one or two spots of ulceration exist in the rectal pouch; but tubercular ulceration is not generally limited to the rectum alone, but rather tends to involve a considerable

portion of the large intestine, being only more marked at the rectum.

The other tertiary manifestations of rectal syphilis are neoplastic in character. Circumscribed gummy deposits of greater or less extent have been quite frequently noted, and are scarcely as rare as would seem to be indicated by the statement of Fournier, that he had never seen a case. Other observers have reported isolated cases, and R. W. Taylor has recently given the notes of four. The deposit may occupy any part of the circumference of the bowel, and in one of Taylor's cases was located in the recto-vaginal septum, and had ulcerated through, causing a fistula. The diagnosis of such a tumor, with its attendant ulceration, offers but few difficulties, and the treatment is both local and constitutional.

Instead of being circumscribed, this gummy deposit may involve the whole circumference of the bowel, and extend from the sphincter as far as the upper limit of the rectal pouch. This is what Fournier has described under the name of ano-rectal syphiloma, and what he believes to be the explanation of most of the cases of syphilitic stricture. For, although he recognizes that stricture may result from late secondary ulceration, in the manner we have described, he believes that stricture from this cause is infrequent as compared with that produced by this diffuse deposit in the rectal wall.

As described by him the disease commences as an infiltration of the rectal wall by this neoplasm. The deposit is entirely submucous, and occurs by preference in the rectal pouch, and always encircles the whole calibre. It may also involve the anus, and may take the form of anal tags and tumors described when speaking of condylomata.

At first it merely causes thickening and stiffening of the gut, so that it loses its dilatability, but there is no contraction and no ulceration until later. As the deposit increases in amount, the mucous membrane over it loses its vitality and becomes ulcerated, and the deposit itself finally degenerates into fibrous tissue, retracts, and causes stricture. This description of the gross appearances and general characteristics of syphilitic stricture will be recognized by all. Fournier was not describing any new affection, but simply, under a new name, "ano-rectal syphiloma," endeavoring to give a complete history of the origin and development of the ordinary syphilitic stricture as seen by every practitioner; and his description in many points corresponds with clinical experience. It must be admitted that in most cases of syphilitic stricture there is more infiltration of the rectal wall; more occlusion of the canal by hard masses of tissue; more extensive disease, in other words, than can easily be accounted for by mere cicatricial contraction; and it seems exceedingly probable that Fournier has more correctly described the true nature of the pathological process than any previous writer.

He does not attempt to describe the initial stage of the deposit. To him it is simply a neoplasm which degenerates and contracts. The whole question evidently turns on clinical observation. Unfortunately I have never seen, in my own experience a syphilitic stricture in the early stage which he describes—an infiltration of the whole calibre of the rectum for a considerable distance longitudinally, but without any change in the mucous membrane covering it—and probably for the reason that he states, that in this stage the disease causes no symptoms. Syphilitic stricture, as generally seen, is just such a combination of ulceration, infiltration, and contraction as he describes ano-syphiloma to be in its more advanced stages.

This affection is said by Fournier to be curable in its early stage (before degeneration and contraction have occurred) by specific treatment, but he has never seen but two such cases. Van Buren says that he also has seen the infiltration disappear under anti-syphilitic treatment.

In addition to these tertiary manifestations of syphilis, Mollière describes a stricture of the rectum due to a specific inflammation of the rectal tunics. He says that in these cases the muscular coat is replaced by connective tissue, which by sclerosis causes atrophy of the muscular fibres. The origin of the trouble is in the muscularis, and not in the submucous connective tissue as with the other forms of stricture.

This is a form of disease which I have never seen.

25 MADISON AVENUE.

Clinical Department.

PRURITUS ANI FROM THE USE OF COFFEE.

DR. S. C. BRIDGEWATER, of Dixon Springs, Tenn., reports the following: Mr. J. H. Y——, aged fifty-five years, a rich farmer and stock-raiser, was afflicted with pruritus ani for ten or twelve years, and had tried almost every nostrum that he could hear of, but without success; he had applied to quite a number of physicians, and only a few succeeded in giving some temporary relief. Some time in April or May last he applied to me for treatment, and I advised him to quit the use of coffee. In a few weeks the symptom disappeared, and has not troubled him in the least since—no other treatment was necessary. He has now been using coffee again for breakfast for two months. Another gentleman, P. W. H——, a druggist, was describing his symptoms to J. H. Y——, who told him of his relief by abstaining from coffee. P. W. H—— also quit coffee, and was likewise cured, or got well. I read of one similar case, about a year or more ago, in THE MEDICAL RECORD, hence my advice.

NON-GRAVID HYDRORRHŒA.

DR. H. J. GARRIGUES, of this city, writes: In the issue of November 20th of THE MEDICAL RECORD I notice with interest some remarks referable to hydrorrhœa in non-pregnant women. Unless Dr. James Oliver has proved, by chemical and microscopical examination, that the fluid secreted in his cases was urine, I think he is mistaken in claiming a parallelism between it and the latter fluid. It is not correct when he says the reproductive and urinary organs are developed from the Wolffian bodies. This applies only to the kidneys, ovaries, and parovaria, whereas the uterus, the organ interested in hydrorrhœa, is formed by a development of the Mullerian ducts.

The disease seems to be very rare. In most text-books on Gynecology it is not even mentioned. Barnes refers briefly to it ("Diseases of Women," London, 1873, p. 83) in speaking of watery discharges in general. Courty is the only author I know who gives particulars. He had seen two cases ("Maladies de l'Utérus," p. 592, Paris, 1866). The following notes of a case that came under my observation about two years ago may therefore be worth recording.

Mrs. M——, aged twenty-nine, American, mother of two children, respectively seven and three years old, consulted me, in August, 1884, exclusively with regard to diagnosis. She was under the treatment of an able gynecologist, but went to various others on account of the rarity of her disease. She stated that in March, 1883, she had a first attack of watery discharge from the womb, lasting three days. It returned in April, and continued without interruption for six months, then it stopped for three months. After that it appeared only immediately after the menstruation, which came on every three weeks, and it lasted for three days. During the last two months she had not menstruated, but, instead thereof, she had had the watery discharge three or four days each time. The discharge was so copious that she used forty diapers a day; that she soaked sheets with it, passed it in a bed-pan, and "filled bottles with it." The appetite was good, defecation and micturition were

normal, but she was exceedingly nervous and compained of nausea. I found the uterus slightly tender, and somewhat enlarged. The sound entered three inches and a half, but at previous examinations, by two others, it had entered five inches. The vaginal portion was of a purple color. A drop of fluid presenting at the os contained large, flat, epithelial cells from the vagina, columnar, non-vibratile cells from the uterus, red blood-corpuscles and pus-corpuscles, and some young indifferent cells with a single large nucleus. The ovaries and tubes could not be felt from the vagina.

A high authority had called it dropsy of the Fallopian tube; another said there had been a cystic tumor, which had burst and continued to discharge.

My diagnosis was uterine hydrorrhœa, caused by endometritis, and my reasons were the following: There was no sign of any affection of the tubes, and there had never been any tumor. The elements found in the fluid were of purely uterine character; the discharge was intimately connected with the menstrual flow, and had of late replaced it. There were signs of an inflammation, or, at least, congestion of the womb.

I have later been told by the physician who sent her to me that she had been cured by treating the womb, which goes far to corroborate the diagnosis made.

Progress of Medical Science.

The Diagnosis of Ascites.—Dr. Tripier, of Lyons, published an article on the means of diagnosing ascites by the vagina. He was led to try this method accidentally. He was attending a young woman for tuberculous pleurisy, and had occasion to examine the uterus. The situation of the os was normal, but when the fingers touched it it seemed to fly from it, by reason of an abnormal mobility. It could be turned in every sense with the greatest facility. A certain amount of liquid was supposed to be present in the cavity of the pelvis, and thus caused the phenomenon. The patient died, and the autopsy confirmed the suspicion entertained during life. Several times subsequently he had recourse to this method, and found it of great utility. He was able to diagnose the presence of liquid at the very commencement of peritonitis or of cirrhosis, and in heart disease at an early date.—*The Medical Press and Circular*, October 20, 1886.

A New Emmenagogue—Oxalic Acid.—Formerly, in making a choice among the agents furnished by the materia medica of an emmenagogue, it was considered that the absence of the menses was due to a congestion or inflammation of the uterus; so that rue, savin, etc., were tried, as they were considered to possess some sort of dynamic action that would calm the congestion of the organ; or else it was supposed that the blood by some means had become altered and had been prevented from taking its habitual course; so drugs like saffron were tried, without much better results. Later it was discovered that the menstrual hemorrhage is nothing more than the consequence of ovulation, and there was a revulsion in therapeutical ideas, as the physiological basis had been entirely false. Suppression of the menstrual flux can be caused by the opposite causes of insufficiency and plethora, action of cold, climate, habit, food, etc., but oxalic acid would seem, from the numerous clinical cases given by Dr. F. Poulet, to act in almost all of the various sorts of amenorrhœa. It was reported that this agent acts equally well in almost all cases of catamenial difficulty where there may exist a febrile reaction with consecutive inflammation of other organs, and also when there is a hemorrhage, or where there is a suppression caused by a cold, which last is so common. Apiol is one of the few sure remedies left to us in amenorrhœa, but it can be used to advantage only when the suppression depends on some nervous cause; but oxalic acid, by the multitude of its applications, suits all cases. Attention is called also by this author to the fact that there exists an antagonism between the action of cinchona and its salts and oxalic acid. He declares that just as much as oxalic acid favors and provokes the menstrual flow, so does quinine prevent it. So that the last should be a good remedy for metrorrhagia; and, indeed, Dr. Poulet and those with him consider quinine much superior to ergot in such cases; there is therefore great danger in giving cinchona preparations to women without considering the menstrual period. Oxalic acid has always been considered a very dangerous poison; but it seems to be one of our physiological proximate principles, since in the normal state it is found in the intestinal juice in considerable quantity, and it is now being studied in animals by Professors Armand Gauthier and Mathias Duval. It probably plays an important rôle in intestinal digestion. The following formula has been used as an emmenagogue:

℞. Acid. oxalic., 1 part.
Aquæ ferventis, 100 parts.
Syr. aurantii corticis amaræ, 30 parts.
M. Sig. Teaspoonful every hour.

In one case the whole of the above was given before the effect was produced; in other cases the menses came on before one-third had been taken.—*Philadelphia Medical Times.*

Improved Suprapubic Lithotomy.—Dr. Thomas Annandale believes that the suprapubic operation for stone in the bladder, which has previously been advocated for children, is also applicable to adults and constitutes an improvement upon the other methods of operating. The steps of the operation as advised by him in the *British Medical Journal*, October 9, 1886, are as follows: 1. The gradual and thorough dilatation of the bladder by the injection of some antiseptic fluid. 2. The introduction of a lithotrite, and the seizing and fixing of the stone in its blades. 3. The depression of the handle of the lithotrite, so as to press the stone against the abdominal wall immediately above the pubes, in the middle line. 4. Cutting down through the abdominal wall, in the middle line, upon the pubes, and immediately above it, in the usual way, until the bladder is reached. 5. Depressing the handle of the lithotrite still more, so as to stretch the wall of the bladder over the stone, and make it prominent at the wound. 6. Incising the stretched bladder-wall upon the stone to a sufficient extent in a direction downward, and then protruding, through the opening, the stone and blades of the lithotrite. 7. Gently opening the blades of the lithotrite and removing the stone, and in withdrawing the lithotrite, catching one end of an india-rubber catheter in its blades, and bringing it out through the urethral orifice, the other end of the catheter being left in the bladder. 8. Stitching the wound in the abdominal wall, and introducing a drainage-tube at its lower end. If the wound in the bladder-wall be small, he thinks it is better not to stitch it, but if it be large, two or more catgut sutures should be inserted. The dilatation of the rectum is not, in his opinion, required, and if employed only complicates the operation.

Back-door Graduates in Germany.—America, it seems, is not alone in the enjoyment of bogus medical colleges. The *Medicinal Zeitung* says it has come into possession of a circular issued by a *doctor juris*, Claisé by name, in which diplomas are offered at fair prices. Would-be-doctors of philosophy, law, medicine, chemistry, etc., need not bother themselves with study, but can obtain the desired degree by the payment of 500 marks. For some of these degrees theses are required, but those will be furnished without further charge by the accommodating directors of the diploma bureau.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ANOTHER ASPECT OF THE "TRAINED NURSE" QUESTION.

THE "trained nurse" question has become a settled factor in our sociological problems. The discussion concerning its merits and demerits has at last reached the daily papers, which, in their correspondence columns, have allowed both friend and foe full say. The trained nurse may be regarded as a new agency for the relief of human suffering, or as merely the extension of an old one. In any event, she has evidently come to stay, and, on the whole, the most satisfactory solution of the matter of hospital nursing is found in the establishment of a well-regulated training-school. It now devolves upon us to extend this new agency for good, and we may congratulate our Boston friends that they have taken the initiative in this good work.

During the past year the practice has been introduced in that city of supplementing the services of the visiting dispensary physicians by the stated attendance of trained nurses at the homes visited. No one with any experience among the poorer classes can have failed to realize how far short of its object skilful medication often fails because it is not followed by intelligent ministration in the home. This new plan of visiting has been of vast benefit to both parties. The necessity of working in an economical manner has been impressed on the nurses. They have been taught that in private work many of the conveniences and appointments of a hospital must necessarily be wanting. They have learned to work without them, and so have become self-reliant. The nurse is brought face to face with many emergencies. She is taught that adaptation to surroundings is a requisite in her calling. Her duties include instructing the poor as to how to give medicine, make a bed, prepare food, ventilate a room, and to perform many other sick-room requisites. She is enabled to make her rounds among the homes of the lowly, and, by spending a short time at each place, to accomplish a vast amount of good.

We do not know of the existence in this city of any association which has this end primarily in view. While every system has its own merits and demerits, we think that no one can seriously question the advisability of this expansion of the work of trained nurses. It should be done through the agencies already existing, rather than by the creation of new ones. Arrangements might be made whereby all recent graduates of training-schools should be employed for a term by some of the dispensaries for this new service. The latter would be a most valuable adjunct to their former experience—very much as a physician desires dispensary work after the completion of his term as a hospital resident. It will cause some expense, it is true, but how much would the efficiency of dispensaries be augmented! If the money of the public, solicited for these institutions, could be employed in this way—and not in erecting new institutions for which there is no need—an advance would be made in the work of helping the poor sick.

THE VALUE OF COMBINING DRUGS.

IT has long been known that by combining drugs certain results may be produced which will not follow if any one of the ingredients be given singly. To Dr. Fordyce Barker belongs the credit of having shown this fact very clearly some years ago.

Quite recently Professor Goll has called attention to some interesting practical points in the same direction. (*Therapeutic Gazette*, September, 1886.) Thus opium, given with irritating or emetic substances, lessens the irritating property. When given with tartar emetic, for example, it prevents the painful retching and cramps, without preventing emesis. When given with mercury the rapid elimination of the latter drug is prevented, it is more abundantly absorbed, and its constitutional effect more quickly obtained.

The utility of opium used in conjunction with morphia is often observed, relieving as it does the subsequent nausea and vomiting. Given with iodide of potassium it will often prevent the disagreeable nasal catarrh caused by the iodide. The combination of belladonna or hyoscyamus with cathartic drugs, in order to prevent the griping, is a well established therapeutical practice. Belladonna, by eventually paralyzing the intestinal muscular fibres, is useful in colic.

Another use for belladonna is its administration as a cardiac stimulant. The following statement of Luchsinger deserves to be widely known: "If the heart is brought to a stand-still, whether by chloroform or potassium salts, by gallic or oxalic acid salts, by apomorphine, quinine, zinc, or poisonous mushrooms, atropine will always succeed in the commencement of the paralysis in restoring the action of the heart." Again, the combination of morphine and atropine in the proportion of twenty to one will accentuate the action of cocaine; combined with chloral, belladonna reduces the paralyzing action of the former on the heart, while, according to Bert, Morat, Aubert, Doster, and Laborde, preliminary injections of atropine will greatly remove the danger of arrest of the heart in chloroform narcosis. Finally, the combination of belladonna with quinine or salicylic acid has deserved the greatest reputation in the treatment of neuralgia.

Still another use of the combination, says the *Gazette*, of drugs is called attention to by Dr. Goll, where the production of solubility plays the most important rôle. Mercury, as is well known, is with difficulty absorbed, and is corrosive in many solutions. The combination of mercury with albumen forms one of the most absorbable compounds. Such a solution is easily prepared by warming a solution of one of the heloid salts of mercury in the presence of a soluble albuminate.

COUNTRY DOCTORS AND HARD THINKING.

We have received a letter from Dr. Colburn Clement, bearing upon the above subject, which is so just and pertinent that we are glad to present it to our readers here. Dr. Clement was evidently a little stirred up by the remark of Dr. Whitford in a dietetic journal to the effect that "country doctors do so little thinking, as a rule." Dr. Clement says: "As one of the class he terms 'little thinkers,' we want to say a word for the provincial practitioner. Doctors who reside in localities remote from large cities and medical centres are necessarily thinkers. Their very independence promotes thought. They have to meet all forms and varieties of disease single-handed. They cannot call in at short notice the specialist, so relied upon in cities, for emergencies. They must decide and act alone. Those disposed to give the credit due the 'country doctors' must therefore, of necessity, admit them to be both thoughtful and not lacking in commonsense. Some people are always 'thinking,' and that settles it. But of what account is thought, unless productive of evident results. Inasmuch as our land is full of 'country doctors,' who achieve brilliant professional results as well as an honorable position among their neighbors, it becomes to us a most satisfactory proof that 'country doctors' think a great deal. Many of the most distinguished members of the profession started, and passed a large portion of their lives, as 'country doctors.'

"We trust Dr. Whitford is not too enthusiastic over his own cogitations.

> Pride, of all others the most dangerous fault,
> Proceeds from want of sense or want of thought.

So says Roscommon."

HOW TO PREVENT A COLD

Under this title Dr. Brown-Séquard makes a contribution to the Société de Biologie which will be read with interest. Everybody catches cold more or less often, and nobody wishes to do so; hence Brown-Séquard's "method" ought to be popular. Under the name of "a cold" are included a number of acute catarrhal inflammations affecting the nasal, pharyngeal, laryngeal, tracheal, or bronchial mucous membrane. In this country we even apply the term to acute affections of the middle ear, the eye, the stomach, intestines, or bladder. The cause of these so-called "colds" is the influence of cold, damp air upon sensitive portions of the body, producing thereby a disturbance of the vascular equilibrium. The result is a congestion which settles down, perhaps with the help of microbes as the late Dr. Austin Flint believed, into an inflammation.

The most sensitive parts of the skin, according to Dr. Brown-Séquard the catarrhal-genetic areas, are the neck and the feet. In order to prevent "colds," therefore, one has only to harden these areas and destroy their sensitiveness. This is done by daily blowing a stream of cool air, by means of an elastic bag, upon the neck, and by immersing the feet in cool water. The air is at first only slightly cool, but is each day made colder, until the neck can stand an arctic blast with impunity. The feet are immersed in water which is, at first, at a temperature of about 90° F., and this is gradually reduced to 38° F.

Dr. Brown-Séquard's method is only a more rigid and elaborate form of a very well-known practice, viz., that of daily bathing in cool water. It will, no doubt, be useful if the person is not aged or weak. Such methods, however, seem after a time to lose their efficacy.

SURGICAL SENSATIONS.

The editors of certain Western dailies have evidently sent word to their New York and Philadelphia correspondents that they want "surgical sensations" for their readers. It has, in fact, become one of the canons of modern journalism that surgical operations make good news-matter for the people. The result is that we are constantly receiving from Cincinnati, Chicago, St. Louis, and other Western cities, marked newspapers containing lurid descriptions of "remarkable operations" for all kinds of every-day surgical conditions. In some cases the surgeon's name is mentioned, in other cases not; but in all cases the operations are marvellous and successful.

In the cases where descriptions are given without names we do not see that criticism is of any use, or is particularly called for. If the daily papers want surgical news they will have it, despite codes, by-laws, or resolutions. The most that can be done is to place the stamp of condemnation upon such medical men as will allow their names to become bandied about the country in connection with extravagant, and often ridiculous, descriptions of medical or surgical cases.

News of the Week.

The Bacillus of Malaria found at Last, says the *Philadelphia Medical Times*. At the conversational meeting of the Pathological Society of Philadelphia, November 3, Dr. Osler communicated the result of a study of the blood in over fifty cases of ague, and he, too, finds the bodies described by Laveran to be constant features. At the Washington meeting of the Association of American Physicians, if we remember rightly, Dr. Osler expressed himself rather doubtfully as to the nature of the bodies he had seen, but further study has evidently convinced him of their parasitic character. He described the bodies as occurring both inside the red corpuscles and free in the plasma. The intra-cellular form appears as either a hyaline or a darkly pigmented body, filling one-third or one-half of the corpuscle, and undergoes slow amœboid changes. The hæmoglobin of the corpuscle is gradually destroyed by the organism, and the stroma becomes pale and finally colorless. There seems to be no doubt whatever about the amœboid character of these movements, which are readily followed with a high-power objective. The forms occurring outside the corpuscle are still more remarkable. These are (1) small, circular, pigmented bodies; (2) curious, crescent-shaped organisms; and (3) an extraordinary flagellate body resembling an infusorian. The pigmented crescents have been noted by all observers, and are much more readily seen than the amœboid bodies. They do not occur so frequently, and apparently only in the later stages of the disease. The flagellate form, also pigmented, is still less common, and

was seen by the lecturer in only six cases. The movement of the flagella is very active, so that it brushes away the red corpuscles in its vicinity. The confirmation given by Dr. Osler, to the observations made by Laveran, Marchiafava, Celli, Golgi, Sternberg, and Councilman, seem to settle the fact that we have found at last a micro-organism peculiar to malaria. This organism belongs probably to the flagellate infusoria. It is observed not only in the febrile paroxysm but in the intervals, and its presence is likely to be helpful in diagnosis; if we cannot yet say that it is the cause of the disease.

WORK OF ST. LUKE'S GUILD.—The object of the Guild is "to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy." The Guild was organized in September of this year, when a charter was received from the parent society in England. The officers of the American Guild are: Dr. W. Thornton Parker, provost, Newport, R. I.; the Rev. George J. Magill, warden, Trinity Church, Newport; Dr. George H. Cleveland, vice-provost, Pentwater, Mich.; the Rev. G. G. Nicholls, treasurer, Jamestown, R. I.; the Rev. W. F. Morrison, chaplain, U. S. Navy. In the two months since the Guild was started members have joined from all parts of the country, including some prominent army surgeons, and corresponding secretaries have been appointed. It has been decided to raise a fund for the maintenance of a medical missionary under the direction of Bishop Boone, of China.

DR. POHLMANN AND AMERICAN MEDICINE.—We have received a letter from Dr. Pohlmann, of Buffalo, regarding his speech made at the meeting of the German Congress of Physicians and Naturalists, in which he states that he did not speak as a representative of the American medical profession, but of the American Association for the Advancement of Science. We apologize to Dr. Pohlmann for the mistake, which was due to the report made of his remarks in a German journal, and not to any wish on our part to do our correspondent injustice. Dr. Pohlmann says that Dr. Virchow did not make the answer which we asserted was made. To this we beg to say that Dr. Virchow did, at one time in the session, intimate that which we asserted he did. The proof of this will be found in the records of the meeting. We regret that the remarks of Dr. C. Pohlmann should have evidently been misunderstood by some of the reporters among his audience, as well as by ourselves.

CASTRATION.—The use of this word to indicate the removal of the ovaries has been adopted by European journals, and has accidentally even crept into the columns of THE RECORD. It is, however, manifestly against all English usage, and has no etymological or lexicographical support. The word is derived from the Latin *castrare*, to castrate or remove the testicles.

THE AMPHITHEATRE is the title of a new monthly medical journal published in this city, and devoted to the interests of the junior members of the medical body and of the medical colleges of America.

THE MICRO-ORGANISMS OF VARICELLA.—Dr. P. Guttmann has found and cultivated three micro-organisms in the eruption of varicella. These were staphylococcus aureus, staphylococcus viridis flavescens, and a third to which a name is not given; none of them were proved to be pathogenetic.

SPLENECTOMY FOR FLOATING HYPERTROPHIED SPLEEN was successfully performed on the 21st ult, by Dr. J. R. Nilsen, at the New York Post-Graduate Medical Hospital. The patient is doing very well. The case will be reported in full later on. This is, we believe, the first case of splenectomy for this disease ever performed in this country.

CHOLERA IN SOUTH AMERICA.—The cholera appears to have chosen South America for its season's work. It exists in epidemic form in several cities of Buenos Ayres, and its presence is reported at Rio Janeiro and in Paraguay.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON have received two thousand pounds under the will of the late Gavin Milroy, one of the earliest workers in sanitary science. Dr. Milroy left the above-mentioned sum for the endowment of a lectureship on public health and sanitation.

A NEW MEDICAL SOCIETY has been organized in Birmingham, Ala., which is to be known as the Alabama Surgical and Gynecological Association.

AN ASYLUM FOR INEBRIATES has been established at Milan, Italy. Such an institution is a novelty, apparently, to the Italians and French. *L'Union Médicale* calls it a "rather fanciful" thing.

DR. WILLIAM A. HENNA died on November 27th, at his residence in this city. He had practised medicine only two years, and was a graduate of the College of Physicians and Surgeons.

A LARGE FEE.—The Boston papers report with comment the fact that a leading physician had been paid a fee of $10,000 for a single surgical operation.

PLEURO-PNEUMONIA AND THE CATTLE GROWERS.—The appeal of the International Range Association to President Cleveland, with regard to contagious bovine diseases, is fully warranted by the imminence of the danger to the cattle interests of the West. Pleuro-pneumonia has at last got west of the Alleghanies, and appeared in several places in epidemic form. The disease is certain to continue its course westward, unless prompt and radical measures are taken to check it. There is but one thing to do, viz., to quarantine and exterminate the infected herds.

COFFEE-HOUSES.—A project for establishing coffee-houses on a large scale throughout the city is again being agitated by a number of philanthropic gentlemen. In the large cities of England, there are already 233 such houses in successful operation. There is no doubt of the value of these institutions in promoting health, temperance, and social improvement. A practical objection to their very wide usefulness, however, is that most Americans cannot drink coffee in the evening, and they will not drink tea.

PASTEUR'S SYSTEM IN RUSSIA.—Since the establishment, four months ago, of the Odessa Bacteriological Station, three hundred and twenty-two patients from all parts of the empire have been treated for hydrophobia, by Dr. Gamalea, on the Pasteur system. Of these, seven died subsequent to their dismissal from the institute.

THE DEATH OF DR. E. P. LEPROHON, of Portland, Me., is announced. The deceased was born in 1825, and was a graduate of Harvard and of the Paris Medical School.

THE DEATH IS ANNOUNCED of Herr Grohe, Professor of Pathology in the college at Greifswald.

NEW YORK SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual meeting of the New York Society for the Relief of Widows and Orphans of Medical Men, was held on November 24th. The following officers were elected for the ensuing year: President, Dr. Gouverneur M. Smith; Vice-Presidents, Dr. Thomas F. Cock, Dr. Everett Herrick, Dr. Henry Tuck; Treasurer, John H. Hinton; Board of Managers (to serve three years), Dr. S. T. Hubbard, Dr. J. H. Anderson, Dr. W. N. Blakeman, Dr. William Detwold, Dr. F. A. Castle, Dr. F. H. Markoe, and Dr. Joseph Wiener.

SALICYLATED WINE.—Over five thousand gallons of wine, containing four and a half grains of salicylic acid to the pint, were recently seized by our City Board of Health.

REGULATING MEDICAL PRACTICE IN TENNESSEE.—Dr. F. L. Sim, editor of the *Mississippi Valley Medical Monthly*, and Chairman of the Committee on State Legislation, has issued a circular to the profession of Tennessee, urging co-operation in securing the passage of a medical registration law. It seems that such a law could readily be obtained of the Legislature, if it were not for the opposition exerted in the profession itself. We trust that Dr. Sim, and those working with him, will be successful this year. The sentiment of thoughtful men is now decidedly in favor of such medical legislation as is being asked for that State.

THE FRENCH CONGRESS OF SURGEONS, which recently finished its second annual session, was an unexpectedly successful affair, and its work has excited much enthusiasm. M. Verneuil was elected President for the ensuing years. The Congress adjourned to meet in 1888, probably in the spring. The number of papers read was very large, but many were of a commonplace character. On the whole, America can do quite as well.

CARRYING HOME "MATERIAL" FOR DISSECTION.—The practice by students of taking home from the dissecting-room anatomical fragments for purposes of more private and secluded study received a slight check in Paris recently. A student who had brought home part of a hand and shoulder, was cited before a judge and condemned to pay the not very heavy fine of five francs.

THE INTERNATIONAL MEDICAL CONGRESS.—According to recent news from Chicago, no one longer doubts the success of the International Congress. The most eminent physicians of Europe have promised to go to Washington in 1887, and many have promised original communications.—*Progrès Médical.*

THE AMERICAN DENTIST IN ENGLAND.—The London correspondent of *The Times* writes: "The American dentist has become almost as fixed an institution in England as the French hairdresser or the German waiter. There are probably two score in London alone, commanding a patronage which would open the eyes of their professional brethren at home. I think dentistry is probably the only thing in which Englishmen would unanimously concede American supremacy."

DARTMOUTH MEDICAL COLLEGE held its annual commencement on November 23d, and graduated a class of nineteen.

PHILADELPHIA has another homœopathic journal, *The Homœopathic Recorder.*

THE SPRINGFIELD, ILL., CITY HOSPITAL is to receive $25,000 from the will of the late Mrs. C. W. Chapin, provided a like sum is subscribed and the city contributes the present hospital property.

THE FAITH-CURE NOT FOR CHILDREN.—An enterprising and well-endowed "faith-cure" congregation in this city, recently established a "faithist" orphanage for children not over twelve years of age. The Society for the Prevention of Cruelty to Children has taken the matter up, and shown that the institution was not legally organized; also, that children should have proper medical attendance when sick. It appears that something like the practices of the "peculiar people" of London were anticipated.

THE QUESTION OF "CASTRATION" AT THE BERLIN CONGRESS.—A very thorough discussion of the subject of operation for pyo- and hydro-salpinx was held at the last meeting of the German Congress of Physicians and Naturalists. Among the speakers were Schramm, Veit, Freund, Hegar, Martin, Fraenkel, Schroeder, and others. The *Medical Press* says of the discussion: "It may be said that the operation never has been looked upon with favor in Germany, not because German surgeons have any sentimental repugnance to it, but because after intelligent trial it has not satisfied the requirements in the cases in which it has been employed. That it has not been grossly and ignorantly abused is evident from the paper and remarks of Martin. If there is one man in Germany who has carried the operation to excess it is Martin, of Berlin. He is everywhere regarded as a bold and eager operator, and his fellow-citizens are not slack in their condemnation of his surgical revellings. Most men have a weakness, and Martin's is amputation of the cervix uteri, and not "castration." As regards this operation, however, his countrymen express the opinion that he carries operative measures to too great lengths, and on comparing his work with that done by other men with large clinics there appears to be some color for the charge. Thus Gusserow's list of "castrations" for pyosalpinx amounts to 14 cases, while Martin's, for pyo- and hydro-salpinx combined reaches 62 cases out of a total of 287 treated; a very great difference truly, but one that becomes dwarfed into insignificance in comparison with the work of an English operator with his total of close upon eighty total castrations in a single year! Nearly all the speakers sounded a note of warning against operating when the case did not require it, and against ex-

pecting the brilliant results some of our operators have led us to expect. And this warning was enforced by two facts, both of which have been absolutely denied by some (not all) English operators. One is, that the virulence of the poison is in many cases only short-lived, and that after the virulence has ceased a condition of quiescence supervenes, in which operation is out of place, because unnecessary; and the second is that recovery not infrequently takes place so completely that conception subsequently follows. In four of Martin's cases conception took place after bilateral disease. It is a little curious that of all the speakers the one who had been foremost in operating pleaded the most strongly for patient, persevering local treatment." Professor Schroeder referred to the tubes and ovaries shown at the Congress by Dr. Hofmeier, and removed from a case in which an operation was apparently strongly indicated, yet the specimens looked almost normal.

Tea as a Cause of Sterility.—Dr. James Davies states, in the *Therapeutic Gazette*, that the Druidic college of the twelfth century considered tannin the most potent of all the products of nature in producing sterility, and that tea-drinking, as practised by the public, undoubtedly acts in the same direction.

The Diuretic Action of the Mercury Salts is, believes Mr. F. S. Locke, due to its stimulating the liver and increasing the amount of urea thrown into the blood by that organ.

Ozone in the Treatment of Diphtheria and Phthisis.—At a meeting of the Clinical Society of the Post Graduate School recently, a portable ozone generator and inhaler was shown by Dr. Seneca Powell, who reported some remarkably successful results from its use in diphtheria and phthisis. The action of the gas is at first slightly stimulant and then hypnotic.

Possible Danger from Pepsin.—It is suggested by Dr. Wood (*Therapeutic Gazette*) that in ulcerated conditions of the bowels or stomach pepsin may enter the blood and cause septicæmia. Dr. E. Chenery reports a case which he thinks confirms this view.

Pasteur's Last Report of his Work.—Pasteur's last report of his work of inoculation for rabies was made to the Académie de Médecine on November 2d. He announced that he had inoculated 2,490 persons, of which 1,750 cases were from France and Algeria. In this latter number there had been 10 deaths, or 1 in 170. The average number of deaths from rabies in Paris annually is 12, but in the last year only 3, of which 1 had been inoculated, but not by the "intensive" method. Pasteur now finds it necessary, in cases in which the face has been seriously bitten, to inoculate more rapidly and with more powerful virus. Dr. Fitsch's failures with the inoculations in Vienna was attributed to his not adopting this more intense and rapid method.

The Journal of Comparative Medicine and Surgery is now published by A. L. Hummel, of Philadelphia. Dr. Conklin has associated with him as editor Dr. R. S. Huidekoper, of Philadelphia. The *Journal* occupies a position at once unique and useful, and we are glad to observe evidences of its prosperity.

Obituary.

JOHN P. GRAY, M.D., LL.D.,

UTICA, N. Y.

Dr. John P. Gray, Superintendent of the State Lunatic Asylum, at Utica, died in uræmic coma, Monday, November 29th, at the asylum in that city.

Since Dr. Gray was shot through the upper jaw, March 16, 1882, by the crank, Henry Remshaw, he has never fully recovered. The wound seriously affected his nasal breathing, left a neuralgia which was almost constant, and gave a terrible shock to the nervous system. Dr. Gray bore up under it manfully, but it weakened him seriously, and rendered the burdens of his position more trying and exhaustive. His intimate friends have been much alarmed about his condition, and the management of the asylum thoughtfully gave him leave of absence last winter, and he spent some time in Thomasville, Ga., and afterward at Carlsbad and elsewhere in Europe. The attempt to return again to his work, and the cares incident to it, proved too much for him, and week by week the disease took closer hold upon him, while his strength failed and sure signs came that the end was near. About three weeks ago the doctor caught a severe cold, from which dated his rapid decline.

Dr. Gray was born in Halfmoon, Centre County, Penn., August 6, 1825, and was educated in the common school, at Bellefonte Academy, and at Dickinson College, and in medicine at the University of Pennsylvania. Receiving the degree of A.M. from Dickinson College in 1846, and of M.D. from the University of Pennsylvania in 1848, he was in the latter year appointed one of the resident physicians of the Pennsylvania Hospital. He was invited to the New York State Lunatic Asylum, in Utica, in 1851, to become third assistant physician. So marked were his qualities and so valuable his services that his promotion was very rapid; for he was appointed second assistant physician in 1852, and first assistant and acting superintendent in 1853, when only twenty-eight years of age. In that year, also, he was appointed medical superintendent of the Michigan State Lunatic Asylum, and designed the plans for the asylum at Kalamazoo. The managers of the institution in Utica had learned his merits and his efficiency, and in 1854 he gave up his position in Michigan and chose the scene of his life-work, beginning his notable career as medical superintendent of the Utica Asylum. His labors as editor-in-chief of the *American Journal of Insanity* began in the same year.

Dr. Gray was married, September 6, 1854, to Miss Mary B. Wetmore, daughter of Edmund A. Wetmore, of Utica, who survives him. To them were born six children, three of whom died in childhood. The Albany Medical College, in 1876, appointed him its professor of psychological medicine, and there, as well as at Bellevue Hospital Medical College, he continued his lectures until 1882. He was in great demand as an expert and gave testimony in the case of the conspirators connected with the murder of Lincoln, in the will cases of Vanderbilt and Fillmore, and the murder trials of Bigot, Buckhout, Frank H. Walworth, and Romaine H. Dillon; also in the case of Guiteau for the assassination of President Garfield. In that trial Dr. Gray directed the policy of the Government in the prosecution, and suggested the course of the examination.

Dr. Gray received several commissions from President Lincoln to report on the cases of criminals alleged to be insane, and was called to examine Payne, one of the fellow-conspirators with Wilkes Booth for the murder of the martyr President.

Personally Dr. Gray was a lovable Christian gentleman, and one who endeared himself to everyone with whom he came in contact.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, November 24, 1886.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

THE MILK-SUPPLY OF NEW YORK.

DR. CYRUS EDSON read a paper relating to the milk-supply of New York City, which, from a sanitary point of view, he said, was second in importance only to the water-supply. With regard to the causation of sickness he spoke of adulterated milk, contaminated milk, and milk from diseased animals. By adulteration he meant the addition of water or other substances, or the removal of the cream. The admixture of calves' brains, rape-seed, and some other materials, formerly said to be common, had never been seen in the milk in this city. The addition of water or the removal of the cream constituted the fraud in ninety-nine cases out of a hundred. To conceal this fraud there might be added sugar and salt to increase the specific gravity and render the milk apparently richer. The use of chalk and lime for this purpose was very rare. To prevent souring, there was sometimes added bicarbonate of soda, carbonate of soda, borax, nitrate of soda, or salicylic acid. In the writer's opinion the addition of preservatives to milk was exceedingly reprehensible. Borax and salicylic acid were irritants to the kidneys.

Having spoken of the adulterants, Dr. Edson considered the tests of milk. The best test was a complete chemical analysis; but this required time and involved expense, hence it was at present not generally practical. An easy and fairly reliable way to determine the addition of water or the removal of the cream was the lactometer. The lactoscope was valuable in determining the amount of fat in the milk, and he had employed it with advantage in estimating the relative richness of human milk. An examination by the microscope was also important.

Concerning contaminated milk, it was well known that milk would absorb disease-germs, and this source of disease had been plainly shown by European observers. Besides the absorption of disease-germs, milk was liable to become contaminated through the impure water with which it was sometimes diluted. The evil influence of swill food, and an excess of the lime salts upon the cow's milk was pointed out. Milk-cows should be fed on wholesome food and given plenty of pure water. Milk from animals having tubercular disease could transmit that disease to the one using it, and there was evidence going to prove that other diseases were sometimes transmitted from the cow, through her milk, to the user of the milk.

The State should have an ample corps of veterinary inspectors, in addition to the ordinary force of milk inspectors, and they should have the power, under proper restrictions, to summarily destroy all animals suffering from infectious diseases. Through a sense of economy the city had limited the number of milk inspectors to two, whereas there should be ten. The State ought to educate the youth in hygiene, and distribute tracts throughout the country relating to the care of cows, and the evil influences of impure milk.

THE FEEDING OF INFANTS DEPRIVED OF BREAST-MILK.

DR. J. LEWIS SMITH read a paper on the above subject, in which he said that no food was so suitable for infants, under the age of twelve months, as the mother's milk. But unfortunately there were instances in which the nutrition of the infant had to be provided for in other ways. Although the employment of wet-nurses of the right kind was to be recommended, it was much safer to intrust the infant to hand-feeding than to give it a wet-nurse who was mentally and bodily unreliable.

Too great honor could not be rendered the illustrious Baron Liebig, who, without reward, devoted so much time to the preparation of a food for infants. While there was a great variety of infant-foods in the market at the present day, they were prepared essentially after Liebig's formula, who inaugurated an era when he sought, by artificially digested food, to relieve the feeble digestive function of infants. While it could not be denied that, following in the footsteps of Liebig, some manufacturers had brought out very good foods, those which were comparatively easily assimilated and nutritious, yet they were usually too expensive for the poor. It was the duty of the physician to recommend a diet for the infant which the poor as well as the rich could employ. The milk of the goat or ass bore a closer resemblance to human milk than any other food. The foods in the shops either contained animal milk or else a large proportion of milk was required to be mixed with them in the nursery. The important problem arose, how to prepare cow's milk so that it would not be rendered indigestible by fermentation in large masses in the stomach? A gentleman was given permission to try koumyss—which was free from this objection—in the Foundling Asylum, but not a single infant did well under its use. The amount of caseine in cow's milk fluctuated greatly, according to the amount of exercise which the cow had, and other conditions, so that the milk taken from the general dairy-can was probably more reliable than milk from a single cow, because it was likely to contain a better average. He had evidence to prove that the greatest deception was sometimes practised in pretending to sell for infants one cow's milk.

The milk designed for infant feeding should be as fresh as possible, and preserved on ice. Unfortunately in New York the milk delivered in the morning was made up of two milkings of the previous day, and it was difficult to prevent some fermentative change in the summer in milk twenty-four hours old. The milk as soon as received should be scalded, as this arrested fermentation and destroyed microbes.

Much ignorance existed among the people, and among some physicians, regarding the amount of dilution with water which should be employed when infants were fed on cow's milk. The water should be previously boiled, in order to destroy any deleterious substances which it might contain, and then be allowed to cool. The following was a safe schedule for the dilution of average cow's milk for infants: to the third week, three parts water; from the third to the sixth week, two parts water; from the sixth to the fourteenth week, one-half water; from the fourteenth week to four and a half months, one-third water; from four and a half months to the sixth month, one-fourth water.

Even the best of cow's milk had a slight acid reaction when fresh. To neutralize the acidity or render it alkaline, he added two or three teaspoonfuls of lime-water at each feeding, and a little salt, perhaps, aided digestion. To prevent coagulation in masses, some gruel or farinaceous substance had been added with success, their action being to keep separate the caseous particles. It had been said that starch was very sparingly digested by an infant under the age of three months. Dr. Smith recommended that five or ten pounds of selected wheat flour be packed in a bag of firm texture, the bag firmly tied with a strong cord, and kept covered with boiling water four to seven days, which would cause a part of the starch to be converted into dextrine, and probably all the starch would undergo some change, rendering it more easily digested. It was not necessary that the water be kept constantly boiling. The external covering of flour should then be removed, and the internal portion employed when needed, grating it off. Two heaping teaspoonfuls was sufficient for a pint of water, in which it

should be boiled for a few minutes, if the infant were under three months of age; add of this a sufficient quantity to the milk instead of diluting with water, and the infant would be better nourished. Four teaspoonfuls to the pint might be employed after the sixth month. Another mode was to make a gruel of barley or other flour, and when cooled to a blood-heat add to it a small quantity of diastase of malt. If the gruel were composed of four teaspoonfuls of barley-flour boiled for ten minutes in a pint of water, there might be added to it, when at blood-heat, a half to a third of a teaspoonful of liquid extract of malt.

Some physicians had used condensed milk with satisfaction, while others had reported that infants fed exclusively upon it did not do so well. Explicit directions should be given with regard to the dilution of condensed milk; it was often diluted to the extent of starving the infant. If condensed milk were diluted four times its quantity with water, and then prepared as directed before with the farinaceous admixture, it could be employed with good results.

Infants should not be fed oftener than once in two and a half hours, if under three months of age, nor oftener than once in three hours above this age. Like adults, some infants required more food than others, but to infants under six weeks only about one and a half ounce should be given at each feeding; at the third month, about two and a half ounces; at the tenth month, a quantity equal to five ounces, or less, of mother's milk.

Food given by the bottle seemed to be better digested than when given by the spoon, as it allowed the secretions of the mouth to become mixed with it.

Meat usually proved laxative, but sometimes two or three teaspoonfuls of beef-juice, two or three times a day after the third or fifth month, seemed to be of benefit.

Dr. Smith believed that a large majority of the prepared foods sold in the shops at from five to ten times their value could profitably be replaced by boiling flour in the manner he had indicated, and it had seemed to him that in infantile diarrhœas the glucose, supposed to be the valuable element in the Liebig foods, produced a laxative effect, and the boiled flour was in this regard the preferable food.

Dr. H. C. Haven, of Boston, present by invitation, said his remarks were based upon experience in an institution where there were about forty infants. For purposes of exact information he had weighed the infants every day, kept record of the exact amount and kind of food given, etc. He thought that if anything positive could be stated regarding artificial feeding it was that the infants should receive the milk before fermentative changes begin. Experience had shown that it was not so much a question as to the composition of the milk, of the food of the cow, or even of the healthfulness of the cow, but rather of the freshness of the milk. For instance, in a certain institution the infant mortality was brought from ninety down to thirty-three and a half per cent. simply by giving the inmates *fresh* cow's milk. He had not been able to raise a single infant on any artificial food, but children taken to the country and given fresh cow's milk did almost as well as if they were given breast-milk. He had seen children steadily losing weight day after day on certain foods, and on sending them to the country where they could get cow's milk not more than four hours old, they commenced at once to gain in weight and improve in condition. People failed as yet to recognize that children had any right to live; they acknowledge it in words, but failed to do so in practice. If as many adults died from the effects of milk undergoing fermentative changes as did infants, one could not find a drop of such milk in a range of a hundred miles. When it came to the question of the right of the mother to deprive the child of the breast, it was not to be decided alone on the ground as to whether during the first year the child appeared to develop and show activity; it was necessary to look farther, and consider whether that child would be as strong and as much of a human being at the age of forty years.

Prof. Leeds, of Stevens Institute, thought that bicarbonate of soba was the least objectionable of the contaminants mentioned by Dr. Edson. Examination of New York City milk showed that much of it was rife with pathogenic organisms, which rendered its use dangerous. The health officers should have more assistance, and their authority should be extended to the supervision of the cows in their stalls and pastures; simply supervising the sale of milk after it reached the market would never insure its healthfulness. He had found great variation in the composition of human milk, even at short intervals, from the same mother. The dangers attending the employment of wet nurses rendered it preferable, he thought, to employ cow's milk, which could be obtained of nearly uniform composition.

Dr. B. F. Dawson could take exception to nothing which Dr. Smith had said, but he would have laid greater stress upon the importance of not giving infants too much food, and especially not to feed them too often, as was commonly done. "Children die of starvation although fed to repletion." The stomach of an infant without food for some hours would retain that which the stomach of a pampered child would reject. Infants could be easily raised on cow's milk if fed properly.

Dr. A. Jacobi said that while woman's milk varied considerably in the proportion of its ingredients, it was still practically the same in its physiological characters. It ought not to be forgotten that digestion is a vital, not a chemical process, and that the infant's digestive organs, as well as those of the adult, permit a great deal of latitude in the food which they receive. While the mother's milk was, as a rule, the proper nourishment for the child, still we had all found that the nutrition afforded by a good wet-nurse was satisfactory.

WET-NURSING *versus* ARTIFICIAL FEEDING.

Dr. Joseph E. Winters had stated in a former paper that the food *par excellence* for an infant was its mother's milk. He did not wish to have anything which he might say this evening understood as a restriction on what he said previously with reference to the importance of the mother nursing her own child; but, when it came to a question of artificial feeding *versus* wet-nursing, we were considering an alternative for the child. He was not discussing the question of artificial feeding for the infants of the masses, those in institutions, but those of the well-to-do and wealthy only.

In deciding between a wet-nurse and artificial feeding for a babe there was a second child, the wet-nurse's, that demanded our conscientious consideration. Deprived of its mother's breast, this child would almost surely die of neglect and starvation. One life is as good as another; *we* certainly have no right to discriminate. When the physician recommended a wet-nurse, he assumed the responsibility of deciding that one child should die that possibly another might live. Dr. Winters was obliged to take statistics from foreign countries, as there were none in this, showing the comparative mortality between wet-nursing and artificial feeding. According to the statistics quoted, the mortality from artificial feeding was less, and he thought the difference in favor of this method was greater than the figures showed. Dr. Winters did not hesitate to say that cow's milk, properly modified, was safer milk for the infant than that of the average wet-nurse. In private practice he had never had a bottle-fed child die during infancy, nor had he ever been compelled to abandon the bottle for a wet-nurse; but he had often been compelled to abandon the wet-nurse for the bottle. Artificial feeding, properly directed and carried out, was perfectly successful; but it depended upon the mother to superintend the feeding of the child in order to obtain success. The woman who was unwilling to supervise the feeding of her own child committed the greatest sin in her life when

she got married. The child should never be left to anyone but the mother, who alone took special interest in its existence. Dr. Winters gave a number of instances of families in this city in which opportunity had been afforded for comparing the results of artificial feeding, feeding by the wet-nurse, and feeding by the mother's milk. The excellent results of hand-feeding were striking, and superior to feeding by a wet-nurse. There were poor women in this city who had nursed their children, and raised them successfully, until somebody told them about the wet-nurse agency. They put their next babe in the nursery and went as wet-nurses for twenty-five or thirty dollars a month. Their own babe died in the nursery for want of a mother's care, whatever may have happened to that of the rich who hired them. But these women, whether married or unmarried, having had one experience, would bear other children, and repeat it; and they were encouraged in it at the nursery, for these institutions also received a fee.

Further remarks were made by Dr. E. C. Harwood, who had had a favorable experience in raising infants on Boardman's condensed milk; by Dr. Dawson, who could add his evidence to that of Dr. Winters, that the rich child's wet-nurse was hired at the expense of the life of the wet-nurse's child; and by Dr. Malcolm McLane.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEETING AT THE COLLEGE OF SURGEONS—THE WILSON BEQUEST OF A MILLION DOLLARS—THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL—DEATH OF PROFESSOR DAVIDSON—MASSAGE—MR. LAWSON TAIT AGAIN—THE PENDING ELECTION AND THE ACTION OF THE BRITISH MEDICAL ASSOCIATION—THE SOCIETY OF APOTHECARIES—UNIVERSITY OF LONDON EXAMINATIONS—A RARE CASE OF EPILEPSY—EXTIRPATION OF THE LARYNX.

LONDON, November 8, 1886.

THE event of the past week has been the meeting (at the college) of Fellows and Members of the Royal College of Surgeons. The attendance was numerous, and the result was pretty much what might have been anticipated when we consider the agitation which has been going on for years. On the present occasion the Members had secured as their champion no less a person than Mr. Timothy Holmes, who moved the first resolution. This embodied very drastic measures of reform. It proposed to give Members of the College a voice in its management and to allow them to sit in the Council. This resolution was opposed by Mr. Erichsen, who might be regarded on this occasion as the representative of the Council, by whom he was a few years ago elected to the presidency of the College. Mr. Holmes' resolution was, however, carried by a large majority. A motion was then proposed and carried, requesting the Council to empower certain members of its body to meet and confer with representatives of the Members and Fellows. Two other motions were also carried, relating to the Society of Apothecaries, and to the proposed changes in the manner of obtaining the fellowship, respectively. If the meeting held on Thursday should lead to no more results than did the similar one of last year, it will not be because the reforms desired by the Fellows and Members were not clearly stated in unmistakable language on this occasion. It will be because the Council are determined to resist reform, and will leave no stone unturned to maintain their present position. The Council have no reason to complain of the manner in which, at the recent meeting, the case of the reformers was presented to them. Mr. Holmes and Mr. Rivington were most able, calm, and judicious advocates. The former has been on the Council, and the latter is still an examiner. Yet both of them vigorously assailed the policy pursued by the Council, and they were ably seconded by numerous other speakers. Mr. Rivington, however, I am sorry to say, much to the regret of his many friends and admirers, made much too long a speech, and greatly tried the patience of his audience. This is not my opinion only, but that of every one with whom I have conversed on the subject, and I have had plenty of opportunity of doing this. I have chatted not only with reformers, but with members of the Council of the College, and the latter generally admit that the first half of his speech was most powerful, but that he spoiled the effect by prolonging it. Let us hope that the councillors will duly consider the first half.

The decease of Lady Erasmus Wilson places at the disposal of the Royal College of Surgeons the munificent legacy left by her late husband, Sir Erasmus Wilson, F.R.S. It is supposed the property will amount to £200,000 sterling. It will be remembered that Sir Erasmus was during his lifetime a generous benefactor of the College and of many charitable institutions.

To-morrow is the last day on which candidates can be nominated for the direct representation of the profession in the General Medical Council, and the election will occupy, I believe, the following three weeks. A good deal of apathy has been displayed in the matter hitherto, but interest is now being awakened as to the result. Very unfavorable comments are being made on the conduct of the "Birmingham caucus." An attempt has been made to produce a belief among members of the British Medical Association that the nominees of the caucus were really candidates of the Association. This is a complete misrepresentation. The members, in two general meetings, not only refused to nominate, but refused to refer the question to their Council. In spite of this that Council has officially passed a resolution in favor of Sir B. Foster and Mr. Wheelhouse, their president and late president. This is an open defiance of the rights of members, and an assumption of authority to speak in their name after being refused permission to do so. It also seems a betrayal of the confidence reposed in them, and calls for decided action on the part of members to insist on their rights and to punish the offenders. Many other misrepresentations have also been made. Mr. Wheelhouse advertises that he has been a general practitioner for thirty-seven years, but those who know him declare that he would have considered it a gross insult to call him so only a few months ago. He got elected into the Council of the Royal College of Surgeons some years ago, on the plea of being a hospital surgeon, and it is difficult to reconcile the two positions. But these British medical leaders seem to think any statement good enough to hoodwink the profession. Since Mr. Ernest Hart declined the nomination, they have adopted, as a third candidate, Dr. Glover, subeditor of *The Lancet*. He declined, with some dignity, to amalgamate with them, but they are still using his name as if he had not stood aloof from them; in fact, as the proverb has it, "hanging on to the coat-tails" of a better man.

Only three representatives are to be elected, but there are no less than fourteen candidates; I fancy some of them may not go to the poll.

The late Professor Dyce Davidson was well enough known in London to make his sudden decease a topic of conversation here. He held the chair of Materia Medica in the University of Aberdeen, and while lecturing, on the 22d ultimo, was seized with apoplexy and died within an hour. He was only about forty-five years of age.

A somewhat undignified discussion has taken place lately in *The Lancet* concerning "Massage." It arose from a review of a little book on the subject lately published by Dr. Murrell, the reviewer indorsing his opinion that it required two years to learn the art of massage. Against this Dr. Sturges protested, and declared that a few lessons were quite sufficient. Other correspondents

mixed in the *mêlée*, and some pretty things were said *pro* and *con*. Two years certainly seem a long curriculum for a masseur. On the other hand, a few lessons will scarcely convert a butler or footman into a skilful manipulator. Injury rather than benefit is likely to accrue from rough treatment by clumsy rubbers, and it would be well, perhaps, if massage were only applied by skilled nurses under the supervision of medical men.

An animated discussion took place at the Medical Society of London, last week, on the question of "The General Principles involved in Removal of the Uterine Appendages." Mr. Lawson Tait read a paper on the subject, which was in his usual vigorous style. He attacked Sir Spencer Wells, who, he said, seemed to regard the reproductive act as a twelfth commandment. He went on to say that much of Sir Spencer Wells' language, in the latter's contribution to the *International Journal of the Medical Sciences*, reminded him (Mr. Tait) of the conduct of a certain Scotch laird who, when in a temper, went out into the street and "swore at large." Mr. Tait himself is not so mealy-mouthed that he need complain of others, and he might bethink himself with advantage of the way in which he behaved to Dr. More Madden at the Brighton Meeting of the British Medical Association. An animated discussion followed the reading of Mr. Tait's paper on Monday last, in which the President, Dr. Croom, Mr. K. Thornton, Mr. Doran, Dr. Bantock, Dr. Heywood Smith, and Dr. Imlach took part. The general tone of the discussion was in favor of Mr. Tait's known views. Mr. Doran expressed a hope that in the future means may be found of catheterizing the tubes, and washing out the tubes and ovaries, so as to avoid the necessity for removing them.

LONDON, November 20, 1886.

THE chief topic of conversation in professional circles continues to be the pending election of direct representatives to the General Medical Council, and more especially the action taken by some prominent officials of the British Medical Association. I have already alluded to the unfair way in which the influence of officers of the Association has been exerted in behalf of two of the candidates. Nominally, the Birmingham caucus have been at work for three candidates, viz., Wheelhouse, Foster, and Glover. The latter gentleman has, however, received but a faint-hearted support from them. A circular sent out in the name of Dr. Waters, on the very day the election began, throws Dr. Glover overboard altogether. There can be no doubt that the selection of Dr. Glover as the third candidate (after Mr. Hart had declined) was designed to gag the *Lancet*, and the manœuvre succeeded. At any rate the latter journal, which had previously fiercely attacked the Birmingham caucus, did so no longer, but maintained a discreet silence. It is no secret that Dr. Glover is not very comfortable with his allies, and in fact refused to amalgamate his committee with theirs, but he cannot be expected to fight against them when they are professing to support him. It goes without saying that the *British Medical Journal* is supporting its two officials (members of the "Journal Committee") through thick and thin. Its pages have been deluged with letters in their support, but some of the communications against them have been suppressed, and in the pages of a contemporary I learn that they even denied admission to the *advertisement* of one candidate. From another source I learn that this dodge had previously been tried on another candidate, who, however, got his advertisement inserted by a threat of legal proceedings if it were excluded. The press may be tampered with, but it is impossible to stop private conversation, and many discreditable stories are floating about. Of some I have good evidence. Thus I have seen letters from officers of the Branches complaining of the pressure put upon them, and speaking of Wheelhouse and Foster as the two "Association candidates," although it has been admitted in the editorial columns of the *British Medical Journal* that they are not—as, indeed, they cannot be after the decision of the Annual Meeting at Brighton. In one Branch the resolution passed by the council of the Association *in favor of two of themselves* was sent out (*under cover of the postage paid out of the Branch funds*) along with a summons to a meeting of the Branch. The same resolution has been reprinted and sent out by one of the secretaries of the Metropolitan Counties Branch (one of the Council, and therefore one who helped to pass the resolution) along with his private card. Can official influence be more misused? Every conceivable attempt is made to throw the ægis of the Association over the two nominees of a small clique—one of these two being actually an Irishman, a Home-Ruler, and a foreign graduate.

Another burning question is that of the Apothecaries' Society. The action of the two colleges in sending a joint refusal to admit the Society into their combination is exciting the most unfavorable comments. Those who are personally indifferent view the step with profound distrust. Many are at a fever-heat of indignation. Most general practitioners (I might almost omit the word "general") are members of the College of Surgeons (M.R.C.S.) and licentiates of the Society of Apothecaries (L.S.A.). The question is therefore one of wide interest. The College of Surgeons has excited more dissatisfaction by this step than it can possibly assuage by its tardy promise to take a vote of the Fellows on the question of the admission of the Members to a voice in its government. Our medical qualifications bid fair to become still more confused. How much simpler it would be to take a leaf from our transatlantic brethren and have only one qualification, viz.: M.D. As it has been often said, "If a medical man is not a 'doctor,' what is he?"

Another subject of minor interest, but one debated in academical circles, is the Draconian severity just exhibited by the examiners of the University of London in the recent examinations for the degree in medicine. Out of seventy-nine candidates, forty-three have been rejected, some of these being sent back for the second, and some even for the third time. Severe as is the examination, such a record is unprecedented. All the candidates have previously passed three stiff examinations, at which all the incompetent ones have been relentlessly weeded out. Nor is it the custom to go up for the final test without the most careful preparation. Yet in recent years twenty to thirty per cent. have been plucked, and this year fifty-four per cent. Turning to some old calendars I find that in three consecutive years (1863–65 inclusive) only one candidate a year was rejected. In 1870 every candidate passed. The standard must have been raised considerably since then for the rejections to rise from four to fifty-four per cent. It cannot be pretended that medical education is inferior now to what it was twenty years ago. On the contrary, much more teaching is now given in our medical schools, better text-books are to be had, and, lastly, most London University candidates now voluntarily prolong their curriculum a year or two beyond the minimum period of four years. Rumor has it that the scanty pass-list this year is due to the action of the examiners in obstetrics, who, stimulated by the condemnatory report of the visitor of the Medical Council (Professor Leishman), have even surpassed their severity of last year. They have chosen a bad opportunity for bringing the University into disrepute.

Turning from medical politics to medical science, Dr. Hughlings Jackson related a case of interest at the last meeting of the Medical Society of London. It was that of a boy of seven in whom any unexpected touch on the head set up an epileptic fit. He had had a convulsion when three days old, and an ordinary epileptic fit when two and a half years old. At the latter age he began to fall down, but these falls were really fits. He never fell unless the face or head were touched, but the fit would not occur if he knew he was going to be touched. Some-

times he would have as many as fifty falls in a day. The left arm and leg were smaller than the right, and he limped with the left leg. Dr. Jackson said this showed a local lesion somewhere. There were, he said, three forms of epilepsy—(1) epilepsy proper; (2) epileptiform seizures;)3) epilepsy due to nervous discharges in the pons Varolii or medulla oblongata.

Last week's meeting of the Clinical Society was almost entirely occupied in the discussion of the subject of excision of the larynx. Most of the speakers argued that this operation should be rarely performed. In closing the discussion Mr. Butlin said that if a surgeon were consulted by a patient suffering from laryngeal epithelioma, and there was nothing for it but excision of the larynx, he would be bound to tell the patient (1) that it was a dangerous operation, with a mortality of from forty to forty-five per cent; (2) that recurrence would probably soon take place; (3) that he would not even get much relief from distressing symptoms, for his difficulty in swallowing and breathing would be as great after as before the operation.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE LIFE, WORK, AND DEATH OF M. PAUL BERT—OVER-PRESSURE IN SCHOOLS—PASTEUR'S REPORTS.

PARIS, November 19, 1886.

YOU will have heard of the death of M. Paul Bert, which took place at Tonquin on the 13th inst., from dysentery, after only a few days' illness. He was sent out to Tonquin as President-General, in April last, and he may be said to have died in the prime of life, as he was only fifty-three years of age. He was born October 19, 1833, at Auxerre, in the Department of the Yonne, where he received his primary education. Afterward he came to Paris with the intention of entering the Polytechnic, which is a school for engineers, but he suddenly changed his project and attended the School of Laws, and after having obtained the diploma of that institution he was about to enter the Magistrature when he decided that it was not his vocation, expressing himself thus: "I criticise the laws instead of teaching and explaining them." He then made the acquaintance of Gratiolet, Prosector at the Museum of Natural History, who admitted him into his laboratory, where, after having acquired a good knowledge of anatomy, he, in 1863, took his degree of Doctor of Medicine, and in 1866 that of Doctor of Sciences. Soon after this he was appointed Professor of Zoology at the Faculty of Sciences of Bordeaux. Afterward he returned to Paris, acted for some time for Flourens at the Museum of Natural History, and subsequently for Claude Bernard at the Sorbonne, between whom and Paul Bert there arose a strong friendship, although, politically, they were greatly opposed to each other.

For some time past men of science have regretted that the Revolution of the 4th of September diverted Paul Bert from a scientific to a political career, and the way in which he distinguished himself in both branches is well known to the world, and yet it cannot be said that he was accomplished in either. Since he entered political life he made a show of continuing his scientific researches, and though they were remarkable in their way, yet his real value as a savant will always remain contested, for his researches and scientific experiments have never been marked by originality. Even his ideas of the influence of the changes of barometric pressure on the phenomena of life, and also on the influence of compressed air on fermentation, were borrowed from engineers who have succeeded, by means of apparatus containing compressed air, to execute a considerable amount of work under water. Observing that the workmen employed in an air compressed under a pressure of several atmospheres were subject to special accidents, M. Paul Bert began to study these phenomena by submitting dogs to different degrees of compression and of decompression. These interesting researches induced him to wish to apply to human medicine the results that he observed in animals, which results were submitted to the Academy of Sciences, where they met with much opposition. Yet, notwithstanding this, his influence was such that the aerotherapic treatment of disease, which was till then employed more or less empirically, now became a recognized method in therapeutics. This method soon got into vogue, and apparatus for compressed air were established at great expense in several hospitals in Paris, but they had to be abandoned, as they did not meet the expectations of the hospital physicians and surgeons. And so it was with his new mode of administration of chloroform, which, however, was not adopted by the surgeons, who preferred the old method after having experimentally proved that that of Paul Bert was not unattended with many drawbacks.

In fine, of all his works there remain a number of items which may serve as materials for future researches, but not one of them contains any conceptions which would perpetuate the name of a savant by their originality or great importance as regards scientific progress. At the commencement of his medical career he published a voluminous thesis on animal grafting, in which he had accumulated a number of experiments, more or less confused and eccentric, to demonstrate facts which had been known centuries before. On taking his degree of Doctor of Natural Sciences the subject of his thesis was: "The Vitality of Animal Tissues." It was after this that he was appointed Professor of the Faculty of Sciences at Bordeaux, where he showed his predilection for practical physiology, and notwithstanding the number of animals that he had sacrificed, it cannot be said that he had made any great discovery. He was appointed Professor of General Physiology at the Sorbonne in 1869, but he was so absorbed with politics that he was seldom or never to be found at his post, and his courses of lectures were mostly confided to his assistant. In November, 1881, when Gambetta was Prime Minister, Paul Bert was appointed Minister of Public Instruction, and what both these revolutionists did during their short ministry of eight months is still fresh in the memory of your readers. In the educational department M. Paul Bert caused a complete revolution, and his antipathy to religious instruction was such that he prohibited the use of the Church Catechism in schools, substituting one of his own composition. His political influence was so great that even the portals of the Academy of Sciences were opened to him, and it may be said that if he had not become a politician he might have been a greater savant.

Over-pressure in schools is justly occupying the attention of philanthropists in the civilized world on both sides of the Atlantic, and the Société Française d'Hygiène, ever ready to promote the interests of the public health, has offered prizes for the best thesis on the following subject: "On Sedentariness in Schools (Primary and Secondary), and on Intellectual Pressure in Superior and Special Instruction." The first part is to contain facts and observations to establish the position. The second will indicate the inconveniences and modifications to be applied in regard to the hygiene of youth. The memoirs should not exceed the limits of a pamphlet in 18mo, of from thirty-two to thirty-six pages. The prizes offered are: (1) a gold medal of the value of five hundred francs; (2) two silver medals, each of the value of one hundred and fifty francs. The memoirs (written in French, English, German, Spanish, Italian) should be forwarded in the usual academical form to the General Secretary of the Society, 30 Rue du Dragon, before April 1, 1887.

With reference to M. Pasteur's report on his antirabic inoculations, which was received without discussion at the Academy of Sciences, it did not pass without being criticised at the Academy of Medicine, where M. G. Colin, the well-known veterinarian, questioned the value of M

Pasteur's statistics. He found terrific the figure 2,400 individuals as having heen treated at the laboratory for rabies, and among these 2,400 there were 1,700 French. This statistic, says M. Colin, is not admissible. Formed by incompetent persons, the elements were not duly verified, and in many cases were not capable of being so. It has frequently happened that a dog after being teased and excited has bitten, and would naturally be pronounced mad. The autopsy is rarely practised, and if it be so, it will only give a presumption. It is sufficient, for the dog to be pronounced mad, that a little redness is found in the throat and a few straws in the stomach, conditions that are observed in other cases, and consequently of little value as a diagnostic sign of rabies. The only certain diagnosis is, according to M. Colin, the death of the dog with paralysis a few days after the appearance of the first symptoms of rabies. Therefore must be deducted from M. Pasteur's statistics, of the animals reported to be mad, a considerable number that are not really so. A second objection is that all persons bitten do not necessarily contract rabies. To these defalcations must be added the number of subjects that had been cauterized. In examining the number of individuals that died annually before the employment of Pasteur's treatment, which was thirty, M. Colin finds that in admitting the correctness of the report there were eighteen or twenty that were saved by inoculation.

IS DENTISTRY A SPECIALTY OF MEDICINE?

"BARBARA, CELARENT, DARII, FERIOQUE PRIORIS."

To the Editor of The Medical Record.

SIR: Inextinguishable laughter must have shaken the sides of the less reverential disciples of the Academy when the mad wag of Sinope threw the plucked cock among them and roared, "Behold Plato's man!" And perhaps it was this sardonic criticism of his definition of man as a featherless biped that caused the master to say—if he said it—"Show me one who can define, and I will show you a god."

We cannot say too often that knowledge is precise in proportion to the accuracy of the definitions upon which it rests. A precise knowledge of what the term "judicial opinion" means, for instance, would have prevented the periodical *Science* from making a grave misstatement of fact in its issue of November 19th, which contained a disparaging editorial note, apropos of a recent prosecution by the Medical Society of the County of New York, which surely would not have appeared if the writer had been careful in testing the accuracy of his facts and definitions. And it is just because of the difficulty of clearly defining terms, and accurately laying down premises, that the law is so uncertain; almost as uncertain as other inexact sciences.

A stray sentence in a recent article of mine on medical legislation has enticed into the perilous mazes of definition the president of the New York State Dental Society, Norman W. Kingsley, D.D.S., who maintains that a doctor of dental surgery, if that be the connotation of the mystic letters following his name, is so called because he is neither a doctor of medicine nor a surgeon, neither a plumber nor a sculptor, but is a dentist—that is to say, a betwixt-and-between, and compound of all these simples.

It is only because every discussion may be of use that tends to clearly define, in a legal sense, what constitutes the practice of medicine, and not from any joy of conflict, or sympathy with the late pestilent Mr. Michael Brady's wife, who argued because it made conversation, that I venture to consider whether the president's "therefore," in the first line of paragraph five, in his letter to THE RECORD of November 20th, is a *sequitur*, and whether there is wrapped up in it a syllogism reducible to any of the forms rendered dear to logical minds by the simple quatrain beginning:

> "Barbara, Celarent, Darii, Ferioque prioris,
> Cesare Camestres Festino Baroko, secundæ."

I must strenuously repudiate any purpose of belittling dentistry as a calling; in fact, by holding it to be, in so far as it is a profession, a branch of medicine, I extol it. And if Plato failed to define a man, it cannot be considered a reflection on President Kingsley to point out that he has failed to define a dentist, who is, as I presume will be admitted, a species of man, and not a distinct creation.

Before we arrive at this pregnant "therefore," a word that indicates the bringing to bed of a logical argument which, after proper gestation, is about to be delivered of a conclusion, the premises must be examined, and a diagnosis made, lest the swelling word prove turgid from other causes, and the wise women smile at us, recalling the verse of Omar:

> "We came like water, and like wind we go."

The premises of the president are to be found in the first four paragraphs of his letter, and, briefly stated, appear to be as follows:

First, dentistry covers every department known under that name, and he alone is truly a dentist who can practise every specialty of it.

Second, a dentist may be an oral surgeon, or several other things, *e.g.*, an anatomist, a physiologist, a mechanic, "but no one of these practised to perfection makes him a dentist."[1]

Third, oral surgery is a specialty of dentistry.

Fourth, oral surgery is not dentistry.

Such is intended to be, and I think is, a fair statement of the contents of the four premise-containing paragraphs; and, after reading them and the locally sequent, "I *therefore* affirm that dentistry is not a specialty of any other science or art, but is a profession in itself," one is fully justified in saying "Great Scot!"[2]

Suppose one of the worthy class of citizens who, with some justice, call themselves tonsorial artists, but whose entitlement of their art as a profession the President declares to be an assumption, the class, to wit, of the barbers, from the efficient loins of whose mystery spring the surgeons—suppose, I say, that the Chief Master of their guild should argue thus:

First, barberism[3] covers every department known under that name, and he alone is a barber in very truth who is able not only to depilate, shear, and adorn, but also by removing scurf, dandruff, and all morbific conditions of the scalp; to pilate, if we may so say, the human head,[4] which is greater than the teeth, as containing them.

Second, a barber may be a mechanic, *e.g.*, a maker of switches, Thompson waves, and other hirsute deceptions of the lovelier sex; he may be a dermatologist, a clever chemical compounder of hairine, bandoline, and other articles terminating in "ine;" a proprietor of baths; above all, a brilliant conversationalist, but none of these callings, not even the last, though practised in perfection, makes him a barber, *teres atque rotundus*.

Third, shaving is a specialty of barberism.

Fourth, barberism is not shaving.

Ergo, I affirm that barberism is not a specialty of any other science or art, but is a profession in itself.

Would the President call this argument?

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[1] Here a fallacy; our disreputable old friend the *petitio principii* lifts his head, which we must deal a lusty blow right off. Our contention is that a perfect tooth-mechanic is an ideal dentist in every sense in which the dentist is not a practitioner in a limited field of medicine.

[2] The esoteric sense of the initiates will perceive at once that this is not slang, as the vulgar might suppose. Reference is made to John Scotus Erigena; and the shade of that greatest of schoolmen and dialectors is invoked, most reverentially, to illumine an age that, by neglect of his favorite studies, has come to consider asseveration as the same thing with demonstration.

[3] Alas that the language supplies no worthier name!

[4] A young lady of Chicago once amused me by further enlarging the modern barber's function and restoring his lost surgical powers. Returning from having her tonsils cut, she said, in reply to a question as to her whereabouts, "I have just been having a tonsorial operation performed."

But "Dentistry," says the President, "and Barberism too," might add the Chief Master, "is a profession, because it is a vocation of beneficence." Well, and what is plumbing, by similar reasoning?

But, to be more serious: let it be admitted that between the President and myself there is no ground on which to differ unless we are to argue for conversation's sake. Zeal for the cause and haste of composition have led him into a chain of statements that will not bear analysis as argument, but constitutes none the less about as good an array of words as can be mustered to defend so weak a thesis as his, viz., that the part is distinct from and as great as the whole. His excellent sense wipes away the sophistry of his sympathies and admits absolutely my contention; for he says: "That which dignifies the practice of dentistry, bringing it above ordinary mechanics, is the fact that the operations are performed upon living organisms, *and that which makes it professional* is the *knowledge of anatomy, pathology, etc., which discriminates in directing the mechanical treatment.*" There is the whole matter in a nutshell. Just so far as dentistry is not a purely mechanical handicraft, it is a branch of medicine. So long as the surgeon was only a blacksmith with a searing-iron, so long as the barber-surgeon mechanically applied a bandage, a cup, or a leech, and nothing more, they were tradesmen, that is to say, "mechanics or artificers whose livelihood depends upon the labor of their hands," and not professional men, that is to say, men deriving their livelihood from the application of abstract knowledge and reasoning thereon to the concrete affairs of life.

The fact that its operations are performed on living organisms does not, *per se*, dignify the dentist's calling over that of the chiropodist, manicure, masseur, or barber, any more than the fact that its operations are performed on inorganic matter belittles the profession of a civil engineer. Nor does the fact that the extraction, filling, and imitation of teeth are carried on chiefly as mechanical operations affect the truth of my statement, excepted to by President Kingsley, that "when the dentists, ceasing to be mechanics, undertake the treatment of diseases of the mouth, they become practitioners of medicine and surgery."

President Kingsley, I assume, would not accept the reasoning of that Caucasian variety of the "Kickapoo Indian," who tried to convince the court recently that a registered dentist had a right to prescribe for a patient's liver, or other diseased organ, if he considered the teeth affected by it. And on my part I admit that the dentist's calling is so largely mechanical in its processes that, just as was that of the surgeon in times past, it has been denied by some to form part of the medical profession. Thus, Webster defines a dentist as "one who makes it his business to clean, extract, and repair natural teeth, and to insert artificial ones." This would make the dentist an artisan. Dunglison, however, in his "Dictionary,"[1] recognized by his definition the calling of dentistry as entirely professional, for he defined a dentist as "one who devotes himself to the study of the diseases of the teeth and their treatment." Neither definition is accurate. The courts also have tried to throw some light on the question of how a dentist should be rated. I will cite three cases only. In Lee *vs.* Griffin (1 E. B. and S., 272) it appeared that a lady, after having ordered two sets of teeth, for the better making of which a model of her mouth had been made, died before she tried them in, but not until after a day had been appointed for her to inspect them. The executors, not considering the teeth as valuable assets, declined to pay for them. The dentist sued them for £21, and his counsel urged that what the deceased contracted for was the dentist's skill and that the materials on which it was exerted were but incidents to the employment—the case being analogous to that of an artist employed to make a picture. But the court said: "The subject matter of the contract was the supply of goods. The case bears a strong resemblance to that of a tailor supplying a coat, the measurement of the mouth and the fitting of the teeth being analogous to the measurement and fitting of the garment." So the plaintiff lost his case in spite of his teeth.

In Michigan the taxation of a dentist's instruments as mechanics' tools was upheld, and the court said that "a dentist, in one sense, is a professional man, in another sense his calling is mainly mechanical, and the tools which he employs are used in mechanical operations."[1] In Mississippi a contrary view was taken, the court saying: "A dentist cannot be properly denominated a mechanic. It is true that the practice of his art requires the use of instruments, . . . but it also involves a knowledge of the physiology of the teeth, which cannot be acquired but by a proper course of study, and this is taught by learned treatises on the subject, and as a *distinct though limited part of the medical art.* . . . If such persons should be included in the denomination of mechanics, because their pursnit required the use of mechanical instruments, . . . the same reason would include general surgeons under the same denomination. . . ."[2]

The function of dentistry being as yet chiefly mechanical, and carried on in well-defined limits, in all the bills recently brought forward by the Medical Society of the State dentists have been expressly exempted from purview; and it will be the questions arising in civil cases, chiefly those for damages resulting from bad work and advice, and not criminal actions, that will eventually settle in what degree the dentist is to be regarded as a professional man. Such a question might arise thus: A, a pretty girl, sues B, a dentist, for damages resulting from an operation whereby her beauty and, incidentally, her lover have been lost. This is an actual, not an imaginary case, and on its threshold the question arises how far did B act as a practitioner in a limited field of medicine, and how far, as a mechanic, is he exempt from liability for ignorance of results that medical education would have taught him might flow from his manual operation.

I am, Sir, your obedient servant,

W. A. PURRINGTON.

[1] Edition of 1866.

POST-PARTUM TROUBLES IN AMERICAN WOMEN—TOO MUCH GYNECOLOGY ONE CAUSE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have read with great interest your recent editorial in THE MEDICAL RECORD concerning post-partum troubles in American women. I cannot agree with Dr. Barnes in his estimate of the causes of injuries following parturition in American women, particularly his assertion that American women are defective in physique. It is very true that we have many women of defective physique in this country, but these it can be proven are mostly of foreign birth. I have been quite an extensive traveller in Europe, but have failed to find the women of any nation more beautiful or better formed than those of the native Americans in the United States. Indeed, our American girls, and especially those of the last generation and those born since the close of the last war, are, in fact, generally superior to those of any other nation, with only a possible exception in the English. Our girls certainly suffer from too much indoor life, but I think this is being very rapidly corrected, and out-of-door games and occupations are becoming more and more popular.

The greatest danger our girls and young women have nowadays to encounter is the amateur gynecologist. As soon as a physician possesses a brass-mounted table and a speculum and a pair of forceps, he is recognized at once as making a *specialty* of gynecology, and the number of congestions, ulcerations, flexions, versions, and

[1] Maxon *vs.* Perrott, 17 Mich., 332. [2] Whitcomb *vs.* Reid, 31 Miss., 567.

heaven knows what all, that afflicts our young girls from sixteen years upward is simply awful! No, the girls are all right, but the gynecologist is all *examinations*. Give our women a reasonable rest, and spare the dreadful nickel-plated speculum, and our women will be healthier and happier, and there will be less to complain of concerning post-partum troubles in American women. The poor uterus, punched, pricked, soaked with iodine, or blistered with nitrate of silver and all the other applications, not to speak of the legion of pessaries which are introduced, for no good reason, is enough to make any woman weak and liable to post-partum troubles, even if such abuse does not make them sterile.

For young girls of sixteen to be subjected to the examination with a speculum, or for girls of nineteen to be obliged to carry about a pessary big enough for a multipara, is certainly not very desirable, and reflects little credit upon the amateur gynecologists who carry out such meddling theories. Gynecology is useful, and oftentimes indispensable; but every candid physician must admit that we have at present in full operation all the gynecologists we shall need for twenty-five years to come. There are other departments of medicine much worse off, as regards numbers, than gynecology, and the advice of the old physician to the younger when asked if an examination should be made, when he replied, "Don't," is good advice in a large number of gynecological cases to-day. PRACTITIONER.

"A SUBSTITUTE FOR CIRCUMCISION."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: On page 562 of the current volume of THE RECORD appears a paragraph in which the stretching of the prepuce is referred to as a novel way of avoiding circumcision. Several years ago, when serving as adjunct-surgeon at the Long Island College Hospital, I had quite a large number of cases of phimosis, which I treated in the manner described: I first introduce a probe under the foreskin to break up the adhesions which generally exist in these cases. Then introducing a pair of dressing forceps, I allow them to expand, thus stretching the narrow opening, turning them around so as to stretch it in various directions. The forceps are then laid aside and the foreskin drawn back to the fullest extent. This is done several times in succession until it can be done with perfect facility. The mother or nurse is shown how to do it, and is directed to do it every day for a week, or until it is no longer a difficult thing to do. The smegma is to be washed away, and a little vaseline applied to lubricate the surfaces each day after washing. Since I first began to treat the cases in this way I have had very few cases of phimosis that needed to be circumcised. It is necessary to instruct the mother not to allow the secretion to accumulate under the foreskin. If it should do so, irritation will be set up, and violent inflammation result.

I do not presume to settle the question regarding the universal performance of circumcision. My own practice is not to interfere with the organ at all, except to see that the foreskin can be easily and fully retracted. My strong impression is that the number of cases, treated in the way described, which require circumcision is *extremely small*. FRANCIS H. STUART, M.D.

1. 123 JORALEMON STREET, BROOKLYN.

THE LONG-BEARD HABIT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I notice that you have a correspondent on this subject who has "sense of humor and proportion" sufficient to trade his own name for the title of "Sanitas" and to agree with the editor that long beards are infection-carriers; and makes complaint that he "is sure that he knows of several cases in which infective fevers have been carried by these means." "Sanitas" also bases his opinion that I have "no sense of humor or proportion" upon the fact that, in my comments on the editorials, I omitted the sanitary part of the question, and "seemed to lay most stress upon the question of diverting physiological energies." To begin, I wonder what the "sense of humor and proportion" is, anyhow. I have never heard of it. I have always understood that most men were endowed with five senses, but I always supposed that humor was a certain relation between things which was perceived by certain senses, and had relations of cognition in the mind. Perhaps a sense of humor is the mental power, or mental weakness, exhibited by a man who does not know the difference between cognition and sense.

I omitted to speak of the sanitary relations of long beards for the reason that my letter was long enough when the question of "diverting physiological energies" was settled satisfactorily. But this sanitary relation is a question of no significance in the relation suggested. It may be true that a doctor's beard will transmit infection. It is also true that his clothing will do the same. If "Sanitas" wears his beard short as a preventive measure, he should cut off his coat-tail for the same reason; and, in fact, as "Sanitas" is sure that infection is carried in this way, I think it is the moral duty of that gentleman to have his hair all shaved off and be stripped and sprayed before visiting a patient, if he has been exposed to any contagion. The suggestion will come up in the mind of almost any thinking person who has a well-developed *sanitary sense*, that physicians ought to use proper precautions when they know that infectious organisms may use them for a coach, and thus be transmitted from sick people to well ones. The personal use of germitoxics by physicians is imperative; but it does not follow by any means that because hair or clothing may carry contagion Dr. Graybeard must cut off his whiskers, or Dr. "Sanitas" must cut off his coat-tail, or pose before his patients in the costume of the original marble Apollo.

Door-handles convey contagion, so do church-pews, car-seats, drinking cups, cigars, food, drink, and, in fact, anything having the name of property, even money; or anything having substance, weight, and dimension may carry contagion. Does Dr. "Sanitas" advocate the abolishment of door-latches, church-pews, car-seats, food and drink, etc., or does he think that these things can be purified by sanitary measures other than by destroying them? The fact that all these things, even hair, may transmit infection is not denied; but the remedy suggested is not "sense." It is bad enough for "Sanitas" to cut off his beard (if he has any) to carry out his "sense" of sanitary "proportion," without wearing his coat-tail short, or be obliged to forego his pew, cigar, door-latch, food and drink, and money. But I need not continue this subject, and will only say that as "Sanitas" is *sure* that he knows something, he should give the profession the benefit of it. Let "Sanitas" tell us how he demonstrated his "several cases" in which long beards carried infection. No doubt from the *a priori* stand-point such things have been done; but let "Sanitas" tell us how he verified it, and, by all means, let him give the length of the beard, and not forget the factor of whether the culpable doctors wore long- or short-tailed coats.

ROMAINE J. CURTISS, M.D.

THE CULTIVATION OF JALAP IN INDIA.—The Madras Government is about to engage in the cultivation of jalap. It was found that the plant grows very well there, and some years ago a large quantity of tubers were given to private individuals in order to encourage them to grow the remedy. But the demand this year from the Madras Medical Department was for 1,300 lbs., and only 400 lbs. could be obtained. So the government has decided to cultivate jalap itself until such time as private growers are in position to supply the demand.

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Original Articles.

LARYNGEAL DIPHTHERIA—INTUBATION AND PATHOLOGICAL ANATOMY.[1]

REPORT OF ONE HUNDRED AND SIXTY-FIVE CASES.

BY W. P. NORTHRUP, M.D.,

PATHOLOGIST OF THE NEW YORK FOUNDLING ASYLUM.

IN 1858, in Paris, a man of prominence in the medical profession, but of somewhat limited favor among his professional brethren, sought to place before the professional world a substitute for a very old and well-approved operation, an operation at that time strongly advocated by a medical magnate. The new resource, but little tried and with meagre results to commend it, was pushed with vigor and lack of tact, till a conflict was brought about, with M. Bouchut on one side and Trousseau and the profession of Paris on the other.

Bouchut, however, established this small fact, which in the irritated discussion hardly came into sight, viz.: that the larynx will tolerate a tube. Theory was against it, practice seemed against it, but the seven cases of Bouchut, in which his thimble had been wedged into the larynx, demonstrated then what has been repeatedly proved since. His cases resulted unfavorably, but in each the laryngeal stenosis had been relieved and the dyspnœa relieved.

If M. Bouchut had been a little more patient, and accumulated more facts, and at length presented them to his brethren with a little more deference, Paris instead of New York might claim this honor of the new and simple and successful device for relieving croup.

A word about Bouchut's laryngeal tube. It was a hollow cylinder, narrower at one end, not unlike a small thimble. This was wedged into the larynx from the end of a hollow sound which was easily separated. An attached thread was brought out from the tube at the angle of the mouth, and fastened so as to add assurance that it would not be swallowed, and at last to remove it. The tube was well borne, but the thread irritated.

Bouchut reported his experiments, made onslaught on tracheotomy, incurred the enmity of its advocates, and the Paris Academy of Medicine accepted the report of its special committee and intubation of the larnyx was declared impracticable. I do not here forget that catheters and long tubes have been thrust into the larynx and temporarily relieved dyspnœa. That antedates Bouchut's work. Since the efforts of Bouchut, for nearly thirty years the records of medical progress make no mention of any similar attempt to hold apart these swollen tissues and let the air go through. It was reserved for a member of this Academy, Dr. Joseph O'Dwyer, quite unaware of the *dictum* of the Paris Academy, and the occasion of it, to demonstrate what Bouchut was so near accomplishing.

The method of intubation is known as "O'Dwyer's Method," and the tubes as "O'Dwyer's Tubes."

It is the purpose of this paper to bring before the Academy the practical workings of this new device for the relief of dyspnœa in diphtheria of the larynx, have its merits candidly discussed, and, if it may be, have it commended to the profession at large with the approval of this dignified body.

Furthermore, the autopsy records of the New York Foundling Asylum have been interrogated to show what they may of the nature of the disease which tracheotomy and intubation are called upon to relieve, and they are here, for the first time, opened to the profession. As autopsies on children dying in private practice are difficult to secure, these records may not be unwelcome.

The records cover five years in time, and represent practically all the cases of death from laryngeal diphtheria in that institution. The number of children under care of the asylum averages 1,800; of which 1,100 are tended by paid nurses, in and about the city, ages extending from birth to seven years.

The autopsy records contain 87 cases of diphtheria of the larynx. Of the 87 cases, 50 were females and 37 were males; average age, two years and seven months. Number of children dying under one year, 13; between one and two years, 9; two and three years, 10; three and four years, 36; four and five years, 11; five and six years, 1; six and seven years, 1; unknown, 6—total, 87.

The greatest mortality was, as we have seen, from three to four years of age, where we find 36 of the 87 cases. The next number falls abruptly to 13, representing those dying under one year.

In clinical experience we learn to dread diphtheria beginning in the larynx. In these records of the dead we find 56 of the 87 began with symptoms indicating that membrane made its appearance in the larynx, either before or simultaneously with that in the pharynx.

In 26 it appeared first in the pharynx; in some it was indeterminate. In 31 cases the average number of days from the beginning of diphtheria to the beginning of croupy symptoms was two and a quarter days; in 54 cases the average time from the beginning of croup till death, from whatever cause, was three and four-fifths days; in 2 cases croup was the first symptom, and the children were dead in twenty hours.

Of the 87 cases, those accompanying or following measles were 22; following scarlet fever, 8; varicella, measles, and scarlet fever in quick succession, 1.

In 54 cases there was pneumonia. Most of the cases, where the lesions were not plainly declared by consolidation and other obvious and unmistakable signs, have been subjected to microscopic examination and the post-mortem diagnosis made on the findings. The test has been parenchymatous inflammatory changes—infiltrated bronchioles; pus in the alveoli and alveolar spaces, fibrin in some; proliferation of epithelium; alveoli wholly filled and distended or partially filled and collapsed, with blood-vessels tortuous and distended and encroaching on the capacity of the alveoli.

The question of collapse, or pneumonia, has been constantly before the mind in examining these lungs, and the above signs of parenchymatous inflammation have, as a rule, almost without exception, proved the presence of pneumonitis. There have been gross appearances of collapse; but what name must be given to the lesion when the alveoli are partly filled with the products of parenchymatous inflammation, the bronchi are infiltrated, perhaps even there is fibrin in the alveoli? It would fail of the truth to call it bronchitis. It would fail as much and more to call it collapse. The lesion is *broncho-pneumonia*. To be sure, by inserting a pipe into a bronchus and blowing into it, you may easily fill out the remaining capacity of the alveolus, even though the bronchi are narrowed by tenacious pus and fibrin-exudate and the finest bronchi are infiltrated and contain pus.

[1] Read before the New York Academy of Medicine, December 2, 1886.

In determining the cause of death in such a complication of sepsis, bronchitis, and pneumonitis and nephritis, there is little satisfaction in attributing the cause to any one of them especially.

The figures here given place the average duration of illness, apart from those cases complicating measles and scarlet fever, at four and a quarter days. In that time membrane may extend from the nose to the finest bronchi, the poison may depress the heart, embarrass the kidneys, and light up pneumonia in the lungs. However, the records have been interrogated on this point, and here is the answer: Of the 87 cases 27 are believed to have died from extension of the diphtheria into the bronchi; 29 cases had sufficient pneumonia to be easily the cause of death. The highest temperatures have been classified, with this result: In 19 cases it was 104°; in 15, 105°; in 3, 106°; in 2, 103°; in 1, 107°—104° and 105° have, then, been the usual temperature at its highest.

It is of especial interest in studying the lesions of so-called "membranous croup" to see the distribution of this membrane. In 9 cases the membrane extended from the tip of the nose to the finest bronchi; in 6, from the nose to the bifurcation of the trachea; in 17, from the pharynx to the finest bronchi; in 17, from the larynx to the finest bronchi; in 17, from the pharynx to the main bronchi; in 17, in the larynx and trachea; in 3, in the pharynx and larynx; in 1, in the larynx only.

In 1 case the membrane was well marked from the pharynx to the middle of the trachea. Between this and the bronchi of the fourth division there seemed to be an entire absence of it, and yet in the finest bronchi a distinct membrane could be demonstrated. A tenacious cast could be drawn out by means of the forceps.

As a rule, with this exception, it has been continuous.

As to emphysema: This has also been a subject of particular observation. Interstitial emphysema has been found in 8 cases; pronounced vesicular distention in 9. The interstitial has been mostly about the anterior portion of the upper lobes and about the root. The vesicular, mainly in the anterior portion of the upper lobes.

Interstitial emphysema has been met with quite as often in marasmus babies dying of inanition as elsewhere —save in whooping-cough.

In considering the cause of death we find the extent of membrane and the condition of the lungs of great importance. When we consider that membrane in the pharynx may in many cases have disappeared at the time of autopsy, we see the extent of membrane was very great. In 3 cases it involved the pharynx and larynx; in 1 the larynx only. We then have 83 of the 87 cases showing very extensive invasion, and, in addition, we find 54 had also pneumonia, and 29 had pneumonia enough to be easily regarded as an efficient cause of death.

The above cases are not gathered from any epidemic, but are distributed over several years—56 are primary diphtheria; the remaining 31 have near or remote relation to measles or scarlet fever.

In the spring of 1881 an unhappy tracheotomist, with a record which would never do to publish, and the like of which never is published, might be seen hovering about the dead-house of the Foundling Asylum thrusting into the larynx of every child which came upon the autopsy-table a little bivalve speculum, about an inch long, so adjusted to a handle thrust through it from above as to approximate the lower ends when so adjusted, and spring apart when detached.

An opportunity occasionally offered, and these specula were placed between swollen and paralyzed vocal cords in live children. They were tolerated. To be sure, at first they excited violent cough, but at length the larynx became quiet and allowed them to remain. They furthermore relieved laryngeal dyspnœa. The objection to the bivalve was that after a time the mucous membrane pressed forward between the edges of the separated valves and dyspnœa returned.

At length the bivalve was discarded altogether, and a solid tube, compressed laterally, was used. This, with numerous modifications, is the one now employed.

The head, or collar, has undergone many changes in shape and size to conform to the shape of the larynx and allow the epiglottis to close over it. The sides of the tube, compressed laterally, are now made bulging, thickest midway, diminishing toward either end. The bulging and the weight of the tube, together with its anatomical fit, retain it in place.

As the literature of the day has fully described the instruments, I will speak of them only in a few particulars.

The mouth-gag is placed between the back teeth of the left side, and so made as to need ordinarily no assistance.

It being on the left side allows room for the operator's hand on the right.

The handle of the introducing instrument turns a sharp curve to a right angle at the base of the tube, in order to economize space in the mouth.

The tubes are now made with a large triangular head, or collar, so adjusted that one angle fits between the arytenoid cartilages and thus steadies it on its axis. The anterior portion is bevelled sharply off, to allow the epiglottis to shut more securely over the aperture and protect it in the act of swallowing. Each tube is designed, as a result of the measurement of many tracheæ, to extend from the false vocal cords to within three-fourths of an inch of the bifurcation, and guard against its lower orifice being plugged by loosening of large plaques of pseudo-membrane in the trachea.

The tube as now made is not often coughed out. The length and weight and lateral bulging maintain it *in situ*, unless, as seldom happens, a plate of thick membrane blocks it from below, when the force from behind is sufficient to drive it out, often projecting it several feet.

The extractor has recently undergone one important improvement. The two movable levers, which separate in the upper orifice of the tube with enough force to drag it out, may be likened to a duck's bill. Originally the farther one moved to and from the nearer. More recently the nearer has been so connected with the lever of the handle as to move to and from the farther. This maintains the tube in its original axis, and makes the difficult manipulation of removal much less difficult.

So, too, the method of inserting the tube has been so fully described as to need nothing further.

One or two points it is well to emphasize:

First, the position of the child.

It should be seated on the nurse's lap in an upright position, squarely facing the operator. It is the tendency to lean the child back somewhat. Then, again, the chin should not be thrown up by the attendant, who usually holds the head while standing behind the nurse. Its position should be as though it hung from the top of its head.

The child should be completely enveloped in a blanket from its chin down, and the grasp of the nurse should not be encircling the chest with her arms, but should be expended on holding the elbows at the side. This allows the child room to breathe, and the operator room to carry the handle of his instruments.

Having hooked up the epiglottis with the left index-finger, the tendency is to carry the handle grasped in the right hand too far to the right side. The inserting and extracting instruments should be worked along the median line. Extraction is no doubt more difficult than insertion. It is much facilitated, however, if the above suggestions as to the position of the child and the relations of the instruments to the median line are observed.

One point, both in inserting and extracting the tube, should be borne in mind constantly—make the attempts short. It is better to try a half-dozen times by short dashes than prolong one.

Having engaged the end of the tube in the larynx,

but little force is needed to sink it into place. Someone has suggested the same rule of procedure as in passing sounds into the male urethra.

Removal of the tube is somewhat difficult; but one ordinarily expert can often do it at first attempt, after a little experience.

As to inserting—one attempt is usually enough.

In preparing for the practice of intubation one is very much favored if he has the cadaver to study on—inserting, and removing, and dissecting. After a sufficient practice the intubation of the live child is found much easier than the cadaver—the muscular action of the patient materially assisting. In the effort to protect the larynx from invasion the child instinctively raises the larynx, holds it firm, closes the epiglottis tightly, and depresses the tongue. The position of the larynx is favorable, while the rigidity with which the epiglottis is held down gives rise often to the most embarrassing part of the proceedings.

To hook up the epiglottis, some thrust the finger first into the beginning œsophagus and bring it forward till it encounters the edge of the epiglottis. Others strike at once upon its convex surface and pass to its edge. In children under two years it is often difficult to hook it up on account of its bending upon itself. These experiences are troublesome, simply because they prolong the time. Since writing the above Dr. O'Dwyer has suggested a word of caution. The tendency is to underestimate the difficulties of inserting and removing the tube. Every day men come to him with sets of new instruments, telling of their chagrin and disappointment in not being able to insert them. Suddenly a patient has called them to a case of croup. Without any experience, they rush for a set of tubes, and back they go and fail of success. He advises practice on the cadaver, and *plenty of it.*

Such practice is not always possible, I suggest, but it is within the range of possibilities, to explore the pharynx and hook up the epiglottis in well children in every-day practice. This experience with normal anatomy will serve good purpose some day. The first exploration will remind the physician of his first vaginal examination, and his observations will be just about as definite.

Another point suggested by Dr. O'Dwyer: Constantly men are coming to him with the complaint that the tube is coughed out, perhaps immediately, perhaps in half an hour. On inquiry it is learned they have put in too small a tube—a tube appropriate for a one-year-old child into a child four years old. They have neglected to gauge the length of tube, measured by the accompanying standard, with the age of the child in years.

It has been my rule, in selecting a tube, to put in the largest size the age will admit, and in children large of the age, and in boys, to select one a size larger than the standard calls for.

Among the questions sure to be asked is this, viz.: "Is there any danger of the tube slipping down into the trachea?" The answer to this question is, *No, there is none.*

First—there never has been such an accident reported.

Second—if you were to insert the proper size, or even one a size or two too small, into the larynx of a cadaver, then cut the trachea just long enough to grasp the end of the tube *in situ*, drag the tube hard down and you would find the head below the vocal cords, but caught by the cricoid cartilage, for there is the smallest diameter.

Another question: "Does it ulcerate the vocal cords?" The answer again is, No. If you examine the tubes you will see the narrowest lateral diameter is just below the head and adjacent to the cords, and it is not wide enough to press heavily. If you examine at autopsy you will see there is no such ulcer. If you examine your recoveries you will see the voice returns in two to four weeks and is normal.

If I may be allowed, I will foretell to you your experience in intubation of the larynx, after a few cases:

There comes to you a sudden call from your neighbor—imperative. You go at once. The first question you ask as you hurry along the street is, "How long has your patient been sick before he became croupy?" Second, "How old is he?" If the doctor answers he is two up to five years old, has been sick three or four days with diphtheria of the fauces and it is clearing off, you say that looks favorable, and you think how your record will look with another case and another recovery, and you are cheerful. If, on the contrary, you hear him say, "He was all well yesterday, and in the night he coughed croupy and can hardly breathe this morning," even before you ask the age you are doubtful. Such diphtheria begins too near the lungs and spreads too fast. He will live thirty-six hours longer. Having reached your patient you will find all the doctor promised you—dyspnœa, indeed, and such dyspnœa! The child thrusts his symptoms on you, and before you reach his crib you have heard the dry, metallic, sawing respiration, seen him throw himself about the bed, quiet down a bit, exhausted, suddenly spring up again, cough—one of those characteristic coughs—have seen his leaden color and anxious countenance. At each inspiration he throws up his chin to help lift his thorax. At each inspiration the bony walls are dragged up by the strong muscles, but the softer parts have no such force, and yield. You listen to the chest. Behind, over the lower portion of both lungs, you feel the rising of the ribs, hear distant rushing sounds, but hear none of that low, near, vesicular filling which we designate murmur. With all his toil he is not getting air enough. Progressive, unremitting dyspnœa which does not yield to remedies requires, at this stage, mechanical interference. The doctor has told them of the gravity of the case, advised intubation; and when it is explained to them that it does not mean chloroform and cutting, they consent. Some member of the family, or if the child has been sick several days a nurse, holds the child. In one case a refined woman and natural mother held the child without a tremor. The child is swathed, the gag is in, the tube is in, the thread is out, the gag is out, and the relieved and bewildered child is looking about, coughing, quite unable to comprehend the surroundings. It gets its breath, the color shows itself. The cough persists, but in ten minutes the child is in a tranquil "child's sleep." I have been called hurriedly to the bedside at this juncture, with the announcement that the child was not breathing. They used their ears and not their eyes. The color was good, and, after inflating his lungs in coughing, the boy was breathing with such ease that there was no sound at a distance of two feet, and the rise and fall of the chest-walls was almost imperceptible.

It is to be your routine experience, at this point, to witness the unbounded gratitude of the parents and friends. The dyspnœa has been wholly relieved, and yet the house does not smell of ether, there are no bowls of bloody sponges, no bloody towels, no two or four surgeons cleaning knives. If it shall be proved that two and two make four in intubation, as well as in tracheotomy, there may be a double truth in what has been said, that "Nothing has so attracted the attention of the profession since the advent of Esmarch's tourniquet.

You will now leave your patient with an untrained attendant, promising to return three hours later, and advising that no food be given till your arrival. An early, severe coughing paroxysm might dislodge the tube before it has settled into place and made peace with the larynx. A little cracked ice can do no harm, and you so advise them.

A great deal of suffering can be saved if you carefully state to the friends the possibility that the tube may be coughed out in your absence. Direct them to drop the tube into a glass of water and send for you, but not to be frightened, for the dyspnœa is not likely to return within four hours.

On your visit, three hours later, you take a cup of milk,

with perhaps a couple of teaspoonfuls of whiskey in it, set the child gently up in bed, place the cup to the lips, allowing the child to hold it also and regulate the amount. It will greedily take two or three swallows, then cough quite hard, then plunge into it again and again till at last it has finished the cupful. Or it may cough too much, reject all it has taken, and fail to get any into its stomach.

You then try, and very likely you may prefer from the outset, undiluted canned condensed milk. This being semisolid is usually well swallowed. If, however, you prefer fluid food, you may try a teaspoonful at a time or a half-teaspoonful, the child lying on its back or on its side, or sitting up. One of these methods is as a rule successful. Professor Waxham, of Chicago, uses a feeding-bottle and stomachtube when the inability to swallow is too great.

Among the semisolids to be made use of are canned condensed milk, which ranks first, frozen milk, scrambled egg, corn-starch pudding, to suit the age of the patient and the caprice of taste.

In one case only have I found nourishing by the mouth impossible. This was a child of seven years. The child was a boy, rather large of his age. I therefore put in a tube somewhat larger than the years called for, thinking it might prove a better fit and less liable to be coughed out. The tube passed easily through the glottis, and yet the head rode high in the larynx. Swallowing was unsuccessful. No milk entered the stomach. The child tried again and again to no effect, and after coughing severely sunk down exhausted. Nourishment was given per rectum, and one after another of the foods tried. I removed the tube after sixteen hours. He drank clumsily even then, some of the milk coming out through the nose, but he soon ceased to cough while drinking. Dyspnœa returned after several hours and I reinserted the tube—this time a smaller one, hoping the head would sink deeper into the box of the larynx and the epiglottis would be better able to cover the aperture. Air entered quite as well as through the larger, but swallowing of milk was no more successful. The child coughed this tube out twice, and twice it was reinserted, after an interval of several hours. This case recovered promptly and fully. Double convergent strabismus followed, however, to complete the ills of a trying case.

It may be you will rely entirely upon milk and whiskey for nourishment, and withhold any medication of an irritating nature, especially till the child learns the trick of swallowing.

You will be looked to for a prognosis. Tell the friends you cannot tell anything about it for forty-eight hours. If no complication makes its appearance in forty-eight hours the prognosis is favorable. Don't shorten it one hour; especially are the last eight hours treacherous. Many disappointments may come in that time. I have seen a promising case playing peek-a-boo in its crib at forty hours and hopeless at forty-eight.

You may think best to remove the tube at some time because the child swallows badly, or because it secretes an unusual amount of tenacious mucus, or because for any reason you desire to give it a good opportunity to use its larnyx to give more explosive force to the cough. The chances are, as you remove it there will follow a large piece of false membrane, or a quantity of mucus, and you will be pleased at your judgment in advising it. The child will breathe fairly well for three or four hours without it, perhaps, or you may argue from the peculiar coarse vibrations of the swollen and relaxed cords that he is still suffering from stenosis. The examination of the chest is the criterion. If the vesicles are not filling well the tube should re-enter the glottis.

One of the most desperate cases I have seen coughed out the tube at the end of forty hours. His breathing was decidedly croupy in sound, but air entered the lungs freely, and I watched him till morning, not wishing to reinsert it until necessary, and fearing still to leave him under eight hours. From eight to twelve hours it may be necessary to be within easy call of such patients.

I believe you will come to the conclusion that it is time for reinsertion of the tube the moment the air ceases to enter freely the posterior portion of the lower lobes. If air cannot enter, and the accessory muscles of respiration are tugging at the thorax, blood will be held in the abundant capillaries of the lung, and more will be drawn in. If the pulse is not strong you can feel its effect on the radial artery. At the instant of beginning inspiration the pulse will be wanting at the wrist. I have seen it again and again. Such a condition can be nothing but harmful to a lung so liable to pneumonia. You have a lung inactive in its posterior portion, its blood-vessels gorged to their utmost, in a disease which is favorable to pneumonia. In your fortunate cases you will find your patient pretty comfortable through the forty-eight hours, and gradually more and more comfortable till he will be climbing out of bed, and you will be fearful lest his exertions may bring on fatal collapse. At last you will have passed all the dangers except late pneumonia.

When shall the tube be removed—supposing it has been a favorable case and needs no removing in the meantime? If the child is two years old or less you will be inclined to wait five or six days. If older, and the normal larynx has more than proportionate room in less than six days, five days will be enough.

Supposing, again, it has passed to forty hours favorably? Its pulse has been (in a three-years-old child) 120; respiration, 24 to 26; temperature, 101½° to 102½°, rectum. On your next visit you find its respiration a trifle quickened, its face a little flushed, and the temperature by the thermometer has advanced a degree or a degree and a half, its pulse has quickened and once or twice in a minute drops a beat. You may find a single watcher on your late visit. The weary friends have retired confident the child is better. "It needs no doctor to tell us that," they say. That visit lasts till broad daylight. That pulse, that increase in respiration, that temperature, means the membrane has reached the finer bronchi and the case is hopeless. Then follows the picture familiar to everybody—rapid respiration, expiratory dyspnœa, restlessness and dyspnœa fearful to witness, stupor, exhaustion, and death.

Dr. O'Dwyer's cases, so far as published, are 48 in number. Of these, 12 have recovered. It is worthy of mention that 25 of these were foundlings.

Fifteen cases were reported in detail by Dr. Dillon Brown, House Physician of the New York Foundling Asylum, together with autopsy records of all cases which died. Everyone is familiar with the low grade of vitality of institution-reared children, and this fact, taken with the ages, accounts for the few recoveries. Of the 15 cases, 4 recovered. "The tube was inserted in every case of severe laryngeal obstruction that occurred in the Asylum, without regard to its hopeless character." "One-third of the babies were aged sixteen, twenty-three, eleven, twelve, and five months respectively." "Two of the fatal cases had tuberculosis; one, a sickly child, died of uræmic convulsions three days after disappearance of all laryngeal obstruction. The report says: "The head or shoulder of the tube does not rest upon the vocal cords, but just above them, on the ventricular bands. There is never any ulceration of the cords, but slight ulceration may be produced by the head and lower end of the tube when retained for a long time. This can do no harm."

Of 25 foundling cases, 6 recovered; of 23 in private practice, 6 recovered. Counting both together (48), 12 have recovered, or 1 in 4.

Dr. F. E. Waxham, of Chicago, was one of the first to publish cases of intubation, beginnimg in June, 1885. In March, 1886, he had published 17 cases, 8 of which recovered. He has now several to divide the honors with him, and their collected cases, recently published, give an aggregate of 83 cases, of which 23 have recovered. Since this number, Dr. Waxham has added to the list, in

his own practice, 13 cases, of which 6 have recovered. Dr. Waxham's cases are well observed, well recorded, and well attested by other physicians. These cases, 96 in number, with 29 favorable results, reach 30¼ per cent. of recoveries. Of the 83 cases, here are details in age: 10 were under two years of age, and 3 recovered; 17 were two to three years of age, and 5 recovered; 14 were three to four years of age, and 3 recovered; 14 were four to five years of age, and 6 recovered; 9 were five to six years of age, and 4 recovered; 7 were seven to eight years of age, and 1 recovered; 2 were eight years of age, and 1 recovered. We are able to give here the conclusions of a man of ample experience in tracheotomy, followed by equally ample experience in intubation. He estimates the advantages in favor of intubation as follows:

"No opposition is met with on the part of the parents and friends; quite a contrast to the difficulty with which we usually meet in obtaining consent to tracheotomy. It relieves the urgent dyspnœas as promptly and effectually as tracheotomy, and if the child dies there is no regret that the operation has been performed, and no discredit attached to the physician.

"There is less irritation from the laryngeal tube than from the tracheal cannula. As the tube is considerably smaller than the trachea it does not press firmly at any portion, excepting at the chink of the glottis. Expectoration takes place more readily than through the tracheal tube. As the tube terminates in the throat the air that enters the lungs is warm and moist from its course through the upper air-passages, and consequently there is less danger from pneumonia. It is a bloodless operation. It is more quickly performed, and with less danger. There is no open wound to close by slow granulation, and convalescence is more rapid. There is no wound that may be the source of constitutional infection. The patient does not require the unremitting care of a physician as in tracheotomy. It is a more successful method of treating diphtheritic or membranous croup than tracheotomy."

Dr. Hance, Resident Physician of the Nursery and Child's Hospital, reports 5 cases, with 1 recovery. The children's ages are all to be named in months, and 1 was bottle-fed, 1 was recovering from severe pneumonia, and 1, a child of five and a half months, was dying from catarrhal trachitis, and the tube was inserted for euthanasia. The case which recovered was the oldest—twenty-seven months. An accident which occurred in the first case is worthy of mention. The tube had been coughed out, together with a large quantity of mucus. After reinserting it, for some reason the thread was not removed, and was allowed to hang from the mouth. The thread disappeared. The child died after a sudden attack of severe dyspnœa, and on autopsy the tube and thread were found in the stomach. The explanation given is satisfactory—that the child swallowed the thread, and in dyspnœa and coughing expelled the tube, which was dragged by the thread into the œsophagus, and thence to the stomach.

Dr. Jennings, of Detroit, reports 4 cases.

In one case, which he does not count, he made several attempts to introduce the tube and failed, as did an expert laryngologist with him. The dyspnœa was urgent. At each attempt at introduction he was unsuccessful in entering the tube into the larynx, but the manipulation relieved the urgent symptoms and the child recovered.

His first intubation, successfully accomplished, relieved the dyspnœa for a time, but the child had great difficulty in swallowing sufficient nourishment. He removed the tube to allow him to take food. Dyspnœa soon reurned, and he reinserted the tube. In this operation a large piece of tenacious membrane was dislodged from the trachea, became wedged in the tube, causing severe dyspnœa. In her struggles the child loosened the tube and pulled out tube and membrane together. The doctor again inserted the tube, and this time the breathing was perfectly easy. Dyspnœa again returned in a couple of hours, and tracheotomy was performed. The tube remained in position while the tracheal tube was inserted low down. "There was no membrane," says the doctor, "below this point, and she breathed with perfect ease." The doctor fully believes the patient would have recovered had he performed tracheotomy at first.

The tube was inserted on the third day of dyspnœa, the case being desperate at the time. In his record he makes no mention of the behavior of pulse, respiration, nor temperature, condition of the child in general, nor the condition of the lungs. I mention this case at length on account of the accident in reinserting the tube. It is well to remember, however, that this was the doctor's first intubation.

His second case died of pneumonia. The croup and pneumonia followed measles. He believes this patient would have died anyway, and gives the tube the credit of relieving the dyspnœa satisfactorily. In his third case the dyspnœa was wholly relieved, though the child died in thirty-six hours from extension of membrane into the bronchi. The fourth case the doctor believes would have recovered by tracheotomy, though the child was moribund when the tube was inserted, was thoroughly restored and relieved, prospered for four or five days, and died on the seventh day with unmistakable symptoms of pneumonia.

Dr. Jennings prefers the cutting operation. and well he may, for he says: "In my experience fully seventy-five per cent. of these cases recover after tracheotomy." He thinks intubation is to be recommended in children under fifteen or sixteen months, and in hopeless cases. To be sure, his experience was unfortunate. In his first case he failed to get the tube in at all. In the second he came to a case which had been in dyspnœa three days, and at last died of exhaustion. He found the fourth case moribund, and she died on the seventh day with pneumonia. Still he believes Cases I. and IV. would have recovered had tracheotomy been performed.

He regards intubation as a supplement to, and not a substitute of, tracheotomy.

He further thinks the laryngeal tube may be useful as a temporary expedient in gaining time to prepare for tracheotomy, and at last as a convenient guide upon which to cut in performing the operation.

His record stands 4 cases and 4 deaths.

The writer of this paper has published 12 cases of intubation, of which 5 have recovered. Of the 5 which recovered, all had diphtheritic exudate in the pharynx, all had albuminuria, all had, before intubation, these conspicuous symptoms, viz.: croupy cough, croup inspiration and expiration, dyspnœa, recessions, restlessness, absence of vesicular breathing over the lower lobes of the lungs behind. Of those which died, 1 died of sepsis, 1 died of sudden heart failure, 1 died of well-marked pneumonia, 4 died of the extension of membrane into the bronchi.

In speaking of the O'Dwyer tube, it will not be without the scope of this paper to mention a very important use in adults—in stenosis of the larynx for any cause, the most common being syphilis. Dr. O'Dwyer believes its usefulness in the future will be more prized in such cases than in croup. One such case he has published, and the every-day experience and the result encourage him in this belief. Tubes of appropriate size are to be had, and the handle and extractor already in use are sufficient to place them and remove them. In the reported case a laryngeal mirror was used to direct the end of the tube into the stenosed larynx, and when it was engaged a second person gently pressed it into place. In two cases of catarrhal croup the tube has been used with pleasing result. In one case the dyspnœa was severe and threatening. After a sojourn of two days, the tube was removed from the larynx and the child recovered propmtly.

Dr. O'Dwyer has found prompt relief from its use, also, in œdema glottidis in a child suffering from nephritis. It

has also been recommended in laryngismus stridulus, though no such case has been published.

Briefly, and in conclusion, the advantages and disadvantages are estimated as follows, in order of importance:

Intubation relieves dyspnœa due to laryngeal stenosis.

There is no objection on the part of the parents and friends.

The operation is comparatively simple, and free from danger and free from shock.

No anæsthetic is needed, and no trained assistants.

No fresh wound is added.

The subsequent care of the case requires no trained attendant.

The inspired air enters the lungs moist and warm.

It does not preclude tracheotomy, and may be found useful as a guide upon which to cut.

Intubation has one conspicuous fault, attested by all. It embarrasses, and sometimes interferes with, the swallowing of fluids. The nourishment of the child is never more important. As a rule, however, the child learns to swallow fairly well, and many times has but slight embarrassment. There is likewise *one danger*, illustrated by one published case. It is the danger of pushing tenacious tracheal pseudo-membrane before the entering tube and blocking the trachea. I know of no death from this cause, but I believe it threatens every reinsertion of the tube after the pseudo-membrane has begun to soften and is easily detached.

The medical profession are called upon to relieve the urgent symptom of laryngeal diphtheria—dyspnœa. For such relief, tracheotomy has been offered. The question now before us is what part of the field intubation is capable of covering, and what advantages, if any, it has over the cutting operation.

First, let us question closely whether it meets the requirements. Does it relieve laryngeal obstruction? Waxham, with 96 collected cases, says it does. O'Dwyer, with 48 cases, says yes. Hance, with 5 cases, says yes. Jennings, with 4 cases, admits that it does. Northrup, with 12 cases, says yes. One hundred and sixty-five cases, carefully reported and well attested, say it relieves laryngeal dyspnœa promptly and effectually. Now, does it leave the patient without any of the advantages offered by tracheotomy?

For the answer to this question we must look to results. Twenty-eight and one-half per cent. have thus far recovered, and in estimating the usefulness of the operation it must be remembered it is new, and while its advocates have been making these records they have at the same time been accumulating experience which will tell in future reports. Some of the accidents here mentioned are grotesque, and can never occur again. I do not mention tracheotomy records, because they are so variously estimated. Do you believe that if every case were collected the percentage of recoveries after tracheotomy would reach twenty-eight and one-half? If the number of cases is insufficient, we have not long to wait, for enterprising Chicago sends us the report of 96 cases. Intubation is in use in Kentucky, Indiana, and Virginia. Ohio and Alabama are inquiring.

THE QUACK AND THE FOOL.—The story is told of a man in Philadelphia, suffering from hernia, who consulted a quack, and was given a written guarantee that he would be cured in four months. He agreed to pay the quack eight dollars a month. After three months' attention the hernia became strangulated, and but for the service of a regular physician the aforesaid patient would have died. Upon recovery he called upon the quack, and demanded his money. The quack replied: "Not one cent will you get from me; all I want is your money. The world is full of just such fools as you." The man departed in sorrow. He recognized the justice of the sentence.

THE CONTAGIOUSNESS OF SCARLET FEVER[1]

BY ARTHUR V. MEIGS, M.D.,

PHYSICIAN TO THE PENNSYLVANIA AND TO THE CHILDREN'S HOSPITALS

MY object this evening is to endeavor to persuade you to accept my views in regard to the degree of contagiousness of scarlet fever. It is a disease so terrible in its effects, both in its power to strike down with the greatest suddenness children apparently the most healthy and the disastrous consequences it so often entails, that it has come to be looked upon, both by the public and physicians, as one of the most actively contagious of our common endemic diseases. The effect of this view, which is almost universally held, is to cause the public to be unreasonably afraid of the complaint, and often the poor sufferer, and certainly those who are obliged to take care of him, are made uncomfortable if they are not actually subjected to privation, by the fact that everyone is afraid to come in contact with those who are obliged to be near the sick-chamber. That the disease is contagious does not admit of doubt, but I have long since arrived at the conviction that it is by no means so much so as is commonly reported, and very much less so than measles or whooping-cough and some of the other common contagious maladies. It is a matter of the greatest importance that we should, from a study of the clinical features of the disease, learn in what manner and at what period it is most contagious, in order that we may use our utmost endeavors to prevent its spread.

I have no elaborate statistics to quote, showing that the facts are as I have stated; I shall, therefore, give instances merely, drawn from my recollection of my personal experience, which seem to bear out the view I have enunciated. I can remember but few instances where I have attended a family of a number of children in which everyone was attacked if scarlet fever was contracted by one. On the other hand, it has been unusual in my practice for any child in a family that was not protected by having previously had an attack to escape, if measles or whooping-cough was brought into the house. Usually whole families of children will have measles at once, taking the disease from one another in despite of every precaution that may be taken to prevent its spread, while with scarlet fever, as a rule, one child of a family, or two, will have the disease and the others will escape. To give a few instances:

CASE I.—In a family consisting of seven children five had scarlet fever, but they all had it in different years, except once, when there were two cases within a short time of each other, but in no instance was any child sent out of the house to prevent his taking the disease. The two cases that occurred the same year were mild, while of the others one was a malignant attack from which the child recovered, the second was severe, and the third caused the death of the child, a girl of four years of age. Two of the children of this family never have had the disease, although they were in the house when the others were ill. When measles and whooping-cough came into this household all had them at the same time.

CASE II.—A family of five children had, one year, measles; all were attacked within a short time of each other; again, in a year or two, all had whooping-cough, after which one died of tubercular meningitis. A year or two later, the family being now reduced to four, two had scarlet fever, and the other two escaped, although they were both in the room with one of the children attacked for an hour or two after the rash was out upon his body before it was diagnosticated. Eight years later another contracted the disease while far from home, at boarding-school; the last has never had it, although now more than twenty years of age.

CASE III.—A child in a family, consisting of four, was attacked with scarlet fever when one of them was away from home. It was impossible to isolate the sick child

[1] Read before the Philadelphia County Medical Society, November 24, 1886.

as it should have been done, for the mother would not keep the other children away from the door of the chamber which was almost always open. The two children who were at home throughout the time the disease was in the house, never took it, although constantly at the door of the sick room; but the fourth child, who was brought home in the midst of the sickness, although the mother was warned of the danger, was, within a few days, attacked with the disease in a mild form.

CASE IV.—In a family of four children, one of which was a nursing infant, the oldest was seized with malignant scarlet fever. Two were sent out of the house, but the infant had to remain with the mother, who, however, was not allowed by her physician to be in the room with the sick child. One of the children sent away was attacked after about two weeks, and brought home and died, but the infant did not have the disease.

CASE V.—In a family of five children, two were taken almost simultaneously with measles, having been exposed to the disease. A few days later, a third developed scarlet fever, then the fourth had scarlet fever, and shortly after the fifth developed measles. As the rash of scarlet fever was disappearing from the body of the fourth child, that of measles came on. The third child had measles about ten days after the onset of his attack of scarlet fever, and one of the two originally attacked with measles developed scarlet fever just as he seemed to be convalescing from the measles. The first and fifth children who, as already stated, had measles, did not contract scarlet fever, although they were in the house throughout the various attacks. This occurred in the family of well-to-do people, living in a large house, and every effort was made to isolate the sick so soon as the diagnosis was made, the third story being devoted to cases of measles and the second to scarlet fever. Thus it appears that of the five children all had measles, but only three scarlet fever, the other two escaping it, although, necessarily much exposed to the contagious influence.

CASE VI.—In a family consisting of four children, one had scarlet fever and none of the others took the disease, although not sent away from the house.

CASE VII.—A girl of sixteen or seventeen, one of a family of three, was seized with scarlet fever while staying in a hotel where they usually spend three or four months in the winter; no one else had the disease, although frequently in the adjoining rooms.

CASE VIII.—A boy, one of a family of four or five young children, had a very severe attack of scarlet fever with double otitis media, and afterward acute nephritis, none of the other children took the disease, although not sent away from the house.

CASE IX.—A boy of three or four years of age was taken with scarlet fever while the mother was nursing a younger child; although she continued to nurse her baby, and passed constantly from the sick chamber of the child with scarlet fever, without changing her clothes, to the infant, he did not take the disease.

CASE X.—Three children, whose father was a coachman, were seized with malignant scarlet fever within a very short time of each other. One died, and the others recovered after being very ill for a long time. I afterward learned that a man who was living in this house at the time was waiter in the family of a gentleman who has the greatest possible fear of the disease, and takes every precaution he can to prevent its being carried to his children. The waiter every evening dressed himself in his evening suit, and went directly from the infected house to wait at his master's dinner-table, but none of the children took the disease.

Upon examining such memoranda as I possess, and turning over in my mind all the cases of scarlet fever I can remember, I find the result confirmatory of what has been said. In the great majority of instances I have had to deal only with isolated cases of scarlet fever, generally but single ones occurring in each family, and exceptionally there being two or three cases; but most rarely have I seen whole families stricken down with the disease, as usually occurs if measles, whooping-cough, or chicken-pox attacks a member of a family, none of whom have previously had the disease.

The above cases I have detailed, not because I have thought them sufficiently numerous to constitute statistical proof of the correctness of my views in regard to the degree of contagiousness of scarlet fever, but as types of what is the usual history of attacks of the disease as they occur in various families. When I have talked with other physicians about their experience, I have been commonly told that they considered the disease as very highly contagious—one of the most contagious; but, when we have come to discuss their individual experiences I have invariably found them to correspond with my own, that usually only one or two cases occur in a family at any one time, and that only in the most exceptional instances are whole families stricken down with the disease.

If, then, the cases I have cited can be accepted as fair representative types of the usual behavior of scarlet fever on the one hand, and of measles and parallel diseases upon the other, it must be acknowledged that it is much less actively contagious than is commonly represented. It has seemed to me that small-pox, measles, whooping-cough, chicken-pox, and rotheln are representatives of one type of the method of propagation of disease, and scarlet fever, diphtheria, and perhaps typhoid fever, of another. With the first-named class it seems sufficient that an unprotected person should go into the room with any one suffering with one of these complaints, to make it extremely likely that he will take the disease. Some near approach to the person having it seems the usual mode of propagation, and the common history of such diseases is that, as a rule, they will attack all, or nearly all, unprotected members of each household into which they go, the disease spreading rapidly from person to person as those liable come in contact with it.

Into the mode of propagation of the second class, however, the question of some endemic influence seems much more largely to enter, and the usual history is that one or perhaps two members of a household are seized with the disease, and only when it is very prevalent in a given locality, its cause being present in an unusual degree of virulence, are whole households stricken down, and in this respect certainly it bears a close resemblance to diphtheria and typhoid fever. It would not, perhaps, be directly within the scope of my present subject, and certainly there is not now time to fully discuss the subject of epidemics of the three diseases classed together, though it would be easy, I think, to show that there is a singular parallelism between the usual life-history of them, both in the way in which ordinarily, but solitary, cases of them occur; and again, in that when they take possession of a locality they attack large numbers of persons living within the infected region, and in that those who remove to another place usually escape the disease; and perhaps more striking than all, how those who have the seeds of the disease already within their bodies when they remove and develop it after their arrival in an uninfected neighborhood, as a rule, do not occasion the outbreak of an epidemic. In this respect more than any other, perhaps, do these diseases exhibit in an unmistakable manner how different they are in their mode of spread from those which are propagated directly from one human body to another without the intervention, as carriers, of any infected food, water, or fomites.

Although my personal experience with scarlet fever has led me to the conviction that it is a much less actively contagious disease than many others, it has not brought me to any satisfactory conclusion with regard to the stage at which it is most contagious, or the method in which it is propagated. At the same time, however, I have observed this radical difference between scarlet fever and measles, and other maladies of the same type—if an unprotected child is brought into close contact, into the same room, for instance, with one having

measles, during the first day or two before the rash is developed, and, as so often happens, for a few hours after it has appeared and before it is diagnosticated, in the great majority of instances the exposure is sufficient and the disease is taken. Quite the converse is true of scarlet fever, however; it commonly happens that the first child to sicken with this disease in any household will be with the other children of the family during several hours, or even over night, after the rash has appeared, if the attack be a mild one and the parents are not easily alarmed, before a physician is called in and the diagnosis made, and yet in the great majority of cases, so far as my experience goes, but seldom do children thus exposed take the disease. Although it may be said in reply to this that the rash of measles does not usually appear until the fourth day and that of scarlet fever within about twenty-four hours after the onset of an attack, yet it seems to me to be clearly demonstrated by clinical observation that scarlet fever is not very contagious during the first day or two of its course, while, on the contrary, in measles it is during the day or two before the appearance of the rash, and when the only symptom is coryza, that the disease is most freely propagated. At the present time, then, there are no data at hand upon which to base an opinion with regard to the precise period at which the contagion of scarlet fever is most active, although, to appeal here again to the results of clinical observation, it does seem to have been demonstrated that the contagion is much more persistent, and remains about a locality or persons much longer than does that of measles.

To depart a little from the precise scope of this paper, and to take up for a moment the question of the management of scarlet fever, it may here be said that in this fact, the but slight contagiousness of the disease during the first day or two after its onset, we have an important indication pointing out that thorough isolation will be much more effectual in preventing its spread than can be hoped for in the case of other more actively contagious maladies. It is, then, in my opinion, a very important matter that whenever a case of scarlet fever occurs in a family, the patient should be placed in a room by himself, and the other unprotected children carefully excluded. This having been done, many of the precautions which are commonly taken to prevent the person who nurses the sick child coming into contact with other members of the household, seem to me unnecessary, as well as often unreasonable or impossible to be carried out, particularly as this person is usually the mother, whose care is often almost as essential to some of the well children as to the patient.

I have mentioned an instance in which a mother went back and forth between a child suffering with scarlet fever and a nursing infant without changing her clothes, and no harm came of it. Not long since I heard of a case in which a physician forbid the mother of a child with scarlet fever to go into the room with her sick child, because she was nursing an infant at the time. During this time she occupied the room next the sick-chamber, and her husband was allowed to go freely back and forth from one room to the other. Such a direction on the part of the physician was clearly both unreasonable and wrong; for in the first place, if the father could go from one child to the other with safety, the additional amount of risk that would have been incurred, because the mother nursed the infant, by allowing her the same right was so infinitely slight that it was not worth taking into consideration; and in the second, as the two children were both equally the children of the mother, it was wrong to deny the sick child the care of the person who in all the world was most interested in her and best able to nurse her successfully; besides that, it was inexpedient because of the agony the mother was subjected to by knowing that one and later two of her children were in the very next room to her, where one of them finally died, suffering for the want of her care.

Certainly the two sick children had as good a right to the care of their mother as the feeble infant to whom, by the direction of her physician, she was forced to give all her attention. Though it cannot be denied that persons not suffering with the disease may carry it to others in their clothes or upon their persons, yet surely the danger must be much exaggerated. It has long seemed to me that the danger of physicians carrying the disease from patient to patient has been much magnified; if it was so great as is commonly represented, the disease would be found everywhere among the families visited by physicians whenever they were in attendance upon cases of scarlet fever, and yet this is not the state of the case. Again, the families of physicians should much more constantly suffer with the disease than any other class of people. My experience leads me to believe that the children of physicians are no more liable to scarlet fever than any others, although this, of course, is a matter of individual opinion, as there is no means at present of proving or disproving the point.

There is another point in regard to the contagion of scarlet fever to which I wish to refer, and it is the question of the advisability, when a child is taken with the disease, of sending the other children out of the house that they may avoid the contagion. In this city, certainly, it is a very common practice for physicians, when called upon to attend a case of scarlet fever among the better class of people, to direct that all the other children be sent away from the infected house. In my opinion this is a good practice, if they can be kept away long enough to render it likely that they will not get the disease upon their return, but a very mistaken policy if they are to be soon brought home again. No child, I think, should ever be sent from a house infected with scarlet fever unless it be arranged that he shall stay away for a period of six weeks at the very least, and I much doubt its advisability if the time is less than three months. Personally, I do not urge the necessity of sending children from an infected house, unless it can be arranged that they shall stay away for as much as three months. It is a matter of common observation that children thus sent away very frequently contract the disease if brought back too soon, more frequently, some observers have thought, than if never sent away, and my opinion upon this point is, as I have already stated, fixed.

I have ventured to call the attention of the Society to this subject, because it is one with the importance of which I have long been deeply impressed, and I have thought the fear of the disease which so commonly exists to be both unreasonable and harmful in its results. My effort, therefore, has been to treat the subject in such a manner as not to arouse needless opposition, but to stir up discussion of and thought upon the matter, by briefly detailing some of my experiences and the conclusions deduced therefrom. I have tried to make my paper reasonably brief and have purposely refrained from quotations, so that I might say, as Sydenham said of his book, it is "neither vast in bulk nor stuffed out with the spoils of former authors."

There is much that might be said in regard to the mode of propagation of scarlet fever upon which I have not even touched—for instance, the question of the rôle played by micro-organisms in connection with the spread of the disease, but I have purposely avoided any mention of such matters, as my desire has been to make my paper purely clinical, and any attempt to discuss such vast and intricate subjects could only lead me away from my theme, without enabling me to say anything which would be worthy of consideration.

The points I have desired to emphasize are: That,

I. Experience shows that scarlet fever is not so actively contagious as some of the other exanthemata, and that it is largely because it is so dangerous a complaint and often so terribly sudden in its effects that it is so considered; and that, therefore,

II. It is proper that we, as physicians, should combat

the unreasoning fear the public have of the disease, and should diffuse more generally an understanding of the real degree of its contagiousness and should lay down rules with regard to what ought to be done to prevent its spread.

III. That it is comparatively slightly contagious during the first day or two after its outbreak, and that, therefore, it is very important to take all reasonable precautions, even if the disease is not very early diagnosticated; in this respect differing radically from measles, whooping-cough, etc.

IV. That the disease is not nearly so much carried from place to place by persons themselves unaffected transporting it upon their persons and in their clothes as is commonly believed.

CLINICAL NOTES ON SYPHILIS.

By B. FARQUHAR CURTIS, M.D.,

NEW YORK.

From January, 1884, to September, 1886, I had under my charge, at the Out-patient Department of Chambers Street Hospital, 145 cases of primary syphilis, 147 cases in the secondary, and 15 cases in the tertiary stage. It will be interesting to study some of the details connected with them.

The cases of chancroid treated during the same period numbered 458, omitting all cases of doubtful diagnosis. This gives a proportion of about three cases of chancroid to one case of true chancre, agreeing with the accepted view that, in the lower ranks of society, the chancroid is the more common disease.

The average period of incubation of the chancre was three weeks—also corresponding to that usually accepted.

Of the 145 cases of chancre, 13 presented more than one ulcer, three being the greatest number, not infrequently resting upon a single indurated base. In a paper read by me before the New York Clinical Society,[1] statistics were given showing that the fact that a venereal ulcer is solitary is of but little value in the differential diagnosis. The prevailing idea that the chancroid is almost always multiple is based on such statistics as those of the Hôpital du Midi[2] giving, in 327 cases of chancroid, multiple lesions in eighty per cent. Debange,[3] in 118 cases, found multiple lesions in fifty-eight per cent. But my own records (including the cases already reported), with a total of 458 cases of chancroid, give a very different proportion, only forty-six per cent. presenting multiple ulcers. Hence, remembering that the chancroid occurred three times as often as the true chancre, we have found, in every 100 cases of venereal ulcers, 2 multiple chancres, 35 multiple chancroids, 23 single chancres, and 40 *single chancroids*. This seems to us the proportion of frequency to be considered in diagnosis in this class of patients—the chances being almost two to one in favor of chancroid, even in solitary ulcers.

The appearance of the ulcer which is the primary lesion of syphilis is, as a rule, characteristic—a dry, pale-red, non-granulating surface, looking as if the skin had been ground away by contact with a grindstone, or its whole surface covered with an adherent, dry, grayish slough. But in some cases the unhealthy granulations, free discharge, and elevated edges of the ulcer make it impossible to distinguish it from a chancroid until the appearance of the typical induration settles the point. This induration is the most valuable of the diagnostic signs of chancre, for in only one case have I failed to find it present at some time. Of this case I give the history, granting at the same time that it is possible, though hardly probable, that the induration may have come and gone during the interval when the patient was not under observation.

October 19, 1885.—John C——, aged nineteen, single, errand-boy, United States, has had gonorrhœa one year ago; never any venereal ulcer before. One week ago, two days after a connection (but having had a connection two months (?) before), he first noticed the present sore—a superficial ulcer, covered by a scab, on the glans penis near the frenum. November 16th, the ulcer has healed under local treatment without induration. March, 1886, he returned with an eruption of papules along the raphé underneath the penis, and with ulcers on the tongue and inside of the cheek, but with no trace of the former sore. He had had but one connection in the interval, one month before, and the eruption on the penis was already present at that time.

The inflammatory induration about a chancroid may for a while present features resembling the induration of chancre, but local treatment and observation for a few days will almost invariably clear up the doubt.

As to the time when induration of the chancre will appear, Ricord[1] teaches that it will be found three weeks after contagion; Taylor[2] says three weeks after the sore is first observed; Otis[3] places it at forty days after contagion; and most of the authorities agree with these last two estimates. But we have observed the induration make its appearance later, even after the original ulcer has healed, as in the following cases:

August 14, 1885.—William W——, twenty-one years of age, single, soapmaker, United States, has had gonorrhœa, but never venereal ulcers. Four weeks ago, two or three weeks after connection, he noticed a sore on his penis. This ulcer is now three-eighths of an inch in diameter, apparently a typical *chancroid*, on the sheath of the penis near its root. He also has an acute gonorrhœa from another connection ten days ago. The ulcer was treated locally, and healed without induration in about one month.

October 9th.—A hard wart has developed on the site of the former sore; patient has had a double inguinal bubo, and the glands are not available for diagnosis.

November 6th.—The "wart" is smaller and harder, and a faint roseola, with ulcers on one tonsil and the tongue, establish the diagnosis "syphilis." Here no induration was present for over eight weeks after the sore was first noticed, and five weeks after the second suspicious connection; but was found (in an unusual form) at the next visit, about four weeks later.

January 15, 1886.—Michael M——, eighteen years of age, single, laborer, United States, has had gonorrhœa, but never venereal ulcers. Three weeks ago, four days after connection (previous connection uncertain), he noticed an ulcer on the under side of the sheath of the penis. It now presents ragged edges, oval shape, and suppurating soft base. Enlarged gland in left groin.

January 22d.—Gland has suppurated; incised. The sore has healed.

March 1st.—Patient seen regularly every week; to-day, for the first time, the scar is indurated, rising above the surrounding surface, feeling as if a patch of soft buckskin had taken the place of the normal skin. No treatment.

April 19th.—Syphilitic general macular and papular eruption. After one week's treatment, patient did not return until August, and by that time the induration had entirely disappeared, and there were no symptoms of syphilis except general adenopathy. In this case the induration appeared nine weeks after the sore, and was of such an unusual character, that the diagnosis was left open until the eruption appeared.

In one case the chancre was painful, and when it had healed, after five weeks of treatment, the indurated cicatrix remained very painful until it had almost disappeared, four weeks later—a very unusual symptom.

[1] N. Y. Med. Jour., 1886, I., 317.
[2] Fournier, in Nouv. dict. de méd. et de chir. prat., t. vii., p. 86.
[3] Thèse de Paris, 1858 (quoted in Venereal Diseases, Bumstead and Taylor, p. 383, Phila., 1883).

[1] Leçons sur le chancre, ed. Fournier, p. 88. Paris, 1858. [2] Loc. cit., p. 494
[3] Genito-urinary Diseases and Syphilis, p. 65. New York, 1883.

The primary lesion was always situated upon the penis, excepting one doubtful case, where it may have been in the rectum. An analysis of eighty-nine cases, where the situation is described more exactly, locates it upon the foreskin in sixty per cent., on the glans in thirty per cent., on the sheath and in the meatus, each five per cent.

In only two cases was lymphangitis of the penis observed, but the enlargement of glands in the groin was never missed. The absence of enlarged glands, after a reasonable time, is to me conclusive evidence that syphilitic infection has not occurred; but their presence is a sign of very uncertain value unless the surgeon knows that they were absent before the appearance of the sore, as so many other causes produce glandular enlargement. In only three cases did suppuration of the glands take place—one has been already related, the other two were also cases of undoubted chancre without complications.

The interval between the time of first noticing the sore, and the first observed symptoms of general infection is recorded in forty-one cases. In twenty-nine of these, in which no general treatment had been instituted, this interval averaged nine weeks; in the other twelve, under treatment, the average was twenty-two weeks, an evident postponement due to treatment, although the number of cases is too small to be useful as an argument in favor of early treatment. Diday's[1] cases without treatment give this interval (the second *entr'acte* of the French, the first *entr'acte* being the incubation of the chancre) as twenty-five to twenty-eight days at the shortest, and seventy to one hundred and five days at the longest—but usually thirty-five to fifty days. I have observed the following cases in which the interval was only three to four weeks, if we can depend upon the statements of the patients, and there was no reason to doubt them.

January 15, 1886.—Albert P——, aged twenty-five years, single, brassworker, United States. Denies previous venereal disease. Noticed present ulcer on his penis three weeks ago, after repeated intercourse with one woman during the month preceding. The ulcer has been extending, and is now one inch in diameter, its base thickened but not very hard. Inguinal glands enlarged. A general papulo-pustular eruption, especially marked on the trunk.

November 16, 1885.—Samuel W——, aged twenty-four years, single, stoker, Ireland. Has had gonorrhœa, also a venereal ulcer once before. Present ulcer noticed one month ago, one month after connection. The ulcer is a typical chancre, and there is a general papular eruption, first noticed three days ago.

Patients with the late lesions of syphilis are not apt to visit a venereal clinic, and the number of tertiary cases observed was small, but among them was one case of sufficient interest to bear relating:

August 10, 1885.—William C——, aged twenty-four years, single, barber, England. Had syphilis, primary and secondary, three years ago, was treated, and has had no symptoms since until the present lesion was observed, four days ago. He has had no connection for these three years. Examination shows an indurated ridge with sharply defined edges, extending across the penis parallel to the corona, and just behind it. Patient has been circumcised, and has no foreskin. The induration feels exactly like that of a chancre, is freely movable with the skin over the tissues beneath, and has several minute superficial ulcers on its surface. Under treatment a slow decrease of size occurred, but the patient was soon lost sight of.

We might mention in this connection that in two other patients, who had had syphilis several years before, recently contracted chancroids became indurated, closely resembling chancres. Perhaps these cases will explain some examples of the second infection of syphilis—they certainly show that no case should be accepted as a true second infection unless typical secondary symptoms follow the supposed chancre.

As to treatment, the usual dispensary "mixed treatment" was adopted, and the results were good. Treatment was begun in every case as soon as a *positive* diagnosis could be made, and continued steadily for many months. In this way secondary symptoms can be modified, or even prevented; and it seems irrrational to delay treatment until symptoms develop which will publish the fact of the patient's infection, and perhaps cause him to lose his situation and means of livelihood.

35 West Thirty-fifth Street.

[1] Quoted in Bumstead and Taylor, loc. cit., p. 471.

A SINGULAR CASE OF "MASTOID DISEASE"—SPONTANEOUS PERFORATION IN AN UNUSUAL SITUATION.

By HUNTINGTON RICHARDS, M.D.,

Assistant Aural Surgeon at New York Eye and Ear Infirmary.

The account of the case alluded to in the title shall be given as concisely as is consistent with a due setting forth of the peculiar features which it presented. These features are unquestionably such as to render the case worthy of being put on record. It has points of interest for the physician who is specially interested in otology, and for the general practitioner. Early in August, the patient, Mr. E——, aged twenty-six, caught cold, having a chill, followed on the next day by sore throat, on the evening of the second day by neuralgic pain in the head and toothache, and on the night of the third day by pain in the left ear. Several days later he consulted a physician who prescribed for his cold, but made no examination of the ear. That night the ear began to discharge. On the day following his physician examined the ear by speculum and mirror, found a perforation of the membrana tympani, and prescribed some "ear-drops" and the use of warm water squeezed from a sponge to relieve the pain. Several days later, that is about four days after the first appearance of the discharge, and one week after the setting in of the earache, his physician ordered the ear to be syringed several times a day with warm water.

About a week later (August 19th) the patient was seen by Dr. Albert H. Buck, who found slight prolapse of the upper wall of the external auditory canal, the membrana tympani red and swollen, but not markedly bulging, and having a small perforation. The patient complained of throbbing in the ear, and stated that he had suffered from intermittent otalgia. The treatment of the case was committed to me by Dr. Buck, who advised immediate paracentesis of the drum-membrane and a Wildes incision, with poulticing and frequent use of the Angelo douche, as a means of obviating, if possible, the necessity for drilling the mastoid process. Accordingly, on the afternoon of this same day I visited the patient at his residence, freely incised the drum-membrane, made an incision through skin and periosteum over the mastoid process, and ordered poultices to be applied over the mastoid region, and the frequent use of the Angelo douche. On the following day no change in the appearance of the auditory canal or membrane was noticed. The discharge, consisting of thick pus, was abundant. I substituted a gravitation douche for the bulb attachment of the Angelo douche, added a strong solution of boracic acid to the water used, and directed the canal to be syringed every hour. Two days later (August 22d) the condition of the patient was unchanged. On the 25th he came to the office. He said he had had some pain in the ear on the preceding night, but that the use of the douche had readily relieved it. The auditory canal was less swollen. The discharge was profuse. "Membrana tympani bulging at back, where the discharge comes through a small opening, evidently

under pressure; is pumped out in thick drops, quickly recurring when wiped away." The wound over the mastoid was discharging but little, so I rubbed a "solid *stick*" of nitrate of silver over its whole surface for the sake of counter-irritation. I also made another free incision in the membrana tympani. Immediately after the incision the patient stated that his ear felt easier; he also heard my watch when held at a distance of one-fourth of an inch from the auricle, whereas previously the watch had only been heard when held in contact with the auricle. The douching was of course continued.

August 28th.—Condition about the same; slight pain occasionally.

August 31st.—The orifice in the membrane was situated just back of, and just above, the tip of the hammer-handle. It was but a small opening, not more than 1.5 mm. in diameter. To increase its calibre I applied a large "bead" of nitrate of silver. About this time I adopted a measure which I had never before used in a similar case. In the absence of pain in the ear, I cautiously inflated, by Politzer's method, at the office, previous to syringing out the canal; and at his home I directed the patient, immediately before using the douche, to inflate by Valsalva's method, telling him to do so only once on the occasion of each douching, to exercise only a moderate degree of expiratory force, and *not* to blow until he should actually hear or feel the exit of the pus through the opening in the drum-membrane. I had ascertained at the office that the Eustachian tube was freely pervious, and that both these methods of inflation sufficed, even with the expenditure of a moderate degree of force, to drive pus through the hole in the drum-membrane. The object of this measure will be obvious to all readers: its utility I question: its advisability I doubt, even when adopted with the utmost caution, as in the present instance. That it acted either helpfully or harmfully in the case I am now describing, I have no positive proof. It never caused the patient any pain in the ear.

September 4th.—The wound over the mastoid was entirely healed, and there was no redness of the integument, and no increase of the tenderness on pressure over this region. The patient had had no pain in the ear since the last visit, and no headache. Nevertheless, the opening in the drum-membrane was still very small, and it was evident that it did not suffice for good drainage of the drum-cavity, still less for its efficient cleansing by the douche. I therefore introduced a paracentesis needle through the opening in the membrane and made a free incision upward and backward from this central hole to its bony margin. The patient called my attention to a slight swelling situated back of the mastoid process, and over its point of junction with the occipital bone. This swollen spot gave him no pain, but was tender on pressure.

September 6th.—On testing it with a probe, I found that the incision in the membrana tympani, made two days before, had healed completely and firmly throughout its extent. The patient's general condition was fairly good, and he had no headache and no pain in or about the ear. The douching at this time, and for about ten days previous, was done every two hours, instead of every hour as at first. The hearing distance for my watch had increased to half an inch. On the whole, the patient appeared to be improving, and nature's aversion to the maintenance of a large opening in the drum seemed to warrant the hope that the case would progress favorably without further surgical interference. The swollen spot behind the mastoid was, however, more tender on pressure, although not painful. Careful palpation of this swelling gave me a suspicion of deep-seated fluctuation, but it was only a suspicion, the sensation being rather like that which would be experienced on palpating over an enlarged and deeply-seated gland. I therefore granted permission for the patient to return to his work.

September 9th.—Condition unchanged, except that the external auditory canal did not seem to be quite so patulous as it did a week before. Ordered the swelling back of mastoid to be painted daily with tincture of iodine.

September 11th.—At last the patient came, complaining of decided pain in the side of his head and about the swelling. The latter had increased in size and in prominence, and palpation of its most bulging portion (which had a diameter of about an inch and a quarter) detected well-marked fluctuation. While making this examination of the swelling by palpation my attention was attracted by the sudden appearance of pus at the orifice of the auditory canal. Gentle pressure, steadily exercised over the area of fluctuation, increased this flow of pus, and, after syringing out and carefully drying the canal, I found on inspection that the pus was forced through the hole in the centre of the drum-membrane. Evidently there existed a very free communication between the superficial abscess behind the mastoid process and the drum cavity. That afternoon I visited the patient at his house, and opened the abscess by a vertical incision about one inch long, drawn directly through the centre of its most prominent and most fluctuating point. The overlying tissues were pretty tough, and the blade of the scalpel, after penetrating them, plunged in to a depth of fully one inch. Free hemorrhage followed this incision, and with the escaping blood was mixed a fairly large amount of pus. A director introduced into the wound to a depth of an inch and a half from the surface, led out nearly pure pus along its groove. The abscess cavity was syringed out with a solution of bichloride of mercury (1 to 1,000), and a portion of the solution was observed to return through the auditory canal. This syringing caused the patient severe pain in the head, but did not make him dizzy. On account of the free hemorrhage I was obliged to stuff the wound and abscess cavity with lint. Poultices were ordered, and the patient was told to go on with the usual douching of the ear.

September 12th.—The patient complained of frontal headache and nausea. When I visited him, at 4 P.M., he had vomited twice, the temperature was 100.2° F., the pulse 92. No pain in or about the ear. There was markedly less discharge through the auditory canal. There was less swelling of the area about the incision. The packing in the abscess-cavity was not disturbed, lest hemorrhage should recur.

September 13th.—Temperature 101° F., pulse 80. There had been no further vomiting, but the frontal headache persisted, and in addition there was also some occipital pain. The edges of the wound had a perfectly healthy look, but no inflammatory reaction had set in, so that the lint pledget still remained firmly adherent to the walls of the cavity. An attempt to loosen it, slowly and carefully made, demonstrated this clearly. The patient reported that the discharge from the auditory canal had entirely ceased, and, on examining by mirror and speculum, I found not a trace of pus clear down to the drum-membrane, while the latter appeared whitish in color and presented no visible perforation. I therefore allowed the patient to discontinue the douching of the ear almost completely, directing that the gravitation douche should be used only twice a day.

Finding that the poulticing had been imperfectly done, I ordered it to be more vigorously kept up, and, on this condition, concluded to risk leaving the lint packing *in situ* one day longer. The next day (September 14th) I found the patient looking better, although he still complained of nausea, and suffered from headache, referred to the supra-orbital and occipital regions. Temperature 100.4° F.; pulse 68. There was a slight discharge of pus from the wound, and the lint pledget was easily extracted. The depth of the wound down to the bone was half an inch. After prolonged probing, an opening into the bone was detected under the extreme upper angle of the wound, and into this opening the probe was introduced to the depth of an additional half-inch, its point

touching what appeared to be the margins of fine bony lamellæ—none of them loose. Into this bone-channel I introduced a small silver cannula, and through it I syringed out the sinus and wound with a weak solution of bichloride of mercury. No return current through the auditory canal, but some of the fluid escaped by the *nostrils*, and was distinctly felt by the patient as it passed through the cavity of the tympanum. Immediately afterward I tested the hearing, and found that my watch, which before had been heard no further than half an inch, could now be heard distinctly when held at a distance from the ear of four and a half inches. A small drainage-tube was inserted in the bony sinus, its outer extremity being stitched to the lips of the wound, and an antiseptic dressing was applied.

On the following day (September 15th) the temperature was 99.8° F.; pulse 66. There was less headache. Moderate discharge from the sinus. Syringed the sinus with the fine cannula used yesterday, and also with a nozzle of such size and shape as closely to fit the drainage-tube. No return current by nostrils, as there had been the day before; but the patient declared that he felt the fluid in his ear. I insufflated by Politzer's method, but neither fluid nor air was driven through the drainage-tube. The insufflation, however, immediately increased the hearing distance of the affected ear from four up to nine inches. The syringing increased the discomfort in the patient's head, and he dates the headache from which he had suffered for the last four days to the syringing done at the time of the operation. Considering the depth and course of the bone sinus, it appeared not impossible that there might be some exposure of the dura mater; at any rate, I concluded to discontinue the syringing at subsequent dressings, or at most to confine myself to a very moderate use of the syringe, and to avoid any approach to forcible injection of the cavity. The exact location of the sinus in the bone, as ascertained by careful measurements, was an inch and a half back of the posterior margin of the meatus auditorius, and on a level with the upper margin of the latter; its direction was at right angles to a plane tangential to the skull at the point indicated. By comparison with the opposite side of the patient's head, this point would appear to correspond pretty closely to the opening of the mastoid foramen leading into the lateral sinus. The bone sinus into which I had introduced my probe and drainage-tube, and through which I had syringed, may have been the mastoid foramen enlarged by pathological breaking down of its walls, or it may have been a gap similarly formed in the masto-occipital suture. However this may have been, it is pretty evident that the cancellous tissue of the patient's mastoid was largely developed, and that it extended unusually far in a posterior direction.

On September 16th, I found the patient quite free from headache, with returning appetite, and a temperature of only 99.1° F. The drainage-tube was removed and a carbolized horse-hair drain substituted. Two days later the hearing distance had increased to fifteen inches, and four days later (September 20th), when the patient came to the office, it had increased to sixteen inches. On September 23d I removed the horse-hair drain and omitted further dressing of the wound; and when I last saw the patient, September 29th, the wound had entirely healed, there was no tenderness on pressure anywhere in its neighborhood; the patient looked and felt better than at any time since the disease in the ear began, and examination of the drum-membrane showed that it was rapidly returning to a normal condition in respect to thickness and texture. The hearing distance, however, was found reduced to six inches. I applied nitrate of silver solution to the naso-pharyngeal space and insufflated the ear by Politzer's method, and advised the patient to do nothing save to continue a course of tonic treatment which had been prescribed, unless he should find, at the expiration of ten days, that his hearing was less acute, or that it had not improved fast enough to suit him; in which contingency he might return for a course of treatment by Politzerization, etc. He has not returned, so I take it for granted that his hearing is better, or at least no worse.[1]

Lengthy as it is, this history is, nevertheless, a condensation of my notes of the case described. A number of points of minor interest are therein recorded, but the chief peculiarities of the case are, I trust, fairly well shown in this published account. These peculiarities are: the tendency to early location of the suppurative process in, and limitation to, the mastoid cells; the formation of a spontaneous opening in the bone, occurring in an adult, and occurring in so insidious a manner, and at a point so remote from the antrum mastoideum; the strong probability that this opening was effected by the breaking down of a thin lamella of bone separating a mastoid cell of considerable size from the mastoid foramen, or from the masto-occipital suture; the strong tendency to healing displayed by the drum-membrane, especially after the establishment of free drainage by the bone sinus; and the rapid recovery of the hearing power.

More active and prompter treatment at the beginning of the attack probably would have saved the patient much pain; perhaps might have cut short the pathological process which subsequently developed to such a serious condition. The establishment of an artificial opening into the mastoid antrum might also have shortened the duration of the attack; but the patient's condition did not warrant the urging of such a step as a necessity. Finally (and that, too, in a markedly insidious manner), the pathological process advanced in such a direction as to effect perforation of the bony wall within which it had been previously confined, and led in this way to cure of the disease. The incision through the overlying soft tissues was most emphatically called for, and merely helped to bring the case to a favorable termination. It is probable, or at least it is possible, that the spontaneous pathological drilling of the bone, or enlargement of one of the chief emissary foramina, supplemented by the incision, saved the life of the patient.

19 East Thirty-eighth Street.

Paralysis after Scarlet Fever.—Among the paralyses consecutive to the acute diseases, those coming on after scarlatina are among the most rare. Dr. Willems, of Gand, relates the case of a young woman, twenty-eight years old, who had a very severe attack of scarlet fever, and toward the end of the eruptive stage began to complain of flying pains in the limbs, accompanied with a certain amount of œdema. Soon after she had a feeling of unusual heaviness in the upper extremities, which was quickly followed by complete paralysis. There were also very severe pains complained of in these members, but thermic and tactile sensibility were unaffected. The complete paralysis of the upper extremities contrasted very strangely with the absolute freedom of voluntary movement remaining in the lower limbs. This condition remained for two days, when power of motion began gradually to return, and at the end of two weeks the cure was complete. During this time there was considerable œdema about the malleoli, but the urine was normal. The localization of this paralysis was very singular, and to explain the local conditions it is necessary to assume that there was a lesion confined to the cervical enlargement of the cord. The nature of the lesion cannot be stated with any degree of certainty. M. Willems was able to find but five recorded cases of scarlatinal paralysis, and these differed very essentially in their clinical features from the case above related.—*Journal de Médecine et de Chirurgie Pratiques*, No. 9, 1886.

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[1] December 6th, patient called at my office. Examination showed H. D. for my watch) in left ear = 2 feet 6 inches; in right ear = 4 feet.

Progress of Medical Science.

EGGS IN THE DIETARY IN BRIGHT'S DISEASE.—In order to solve the problem of alimentation in the subjects of Bright's disease, Löwenmeyer placed a number of patients upon a regimen which was as regular as possible, and added to the diet-list from six to nine eggs a day. In four of the patients, of whom three suffered from amyloid kidney and one from nephritis consecutive to cardiac disease, the addition of eggs to the dietary was followed by no increase in the excretion of albumen in the urine. In three others there was a notable increase; but the experimenter excluded two of them, one because the patient was not carefully watched, and the other because menstruation occurred just after the beginning of the experiment. In the third case, one of interstitial nephritis, the author remarks that the increase in albumen might be accounted for by the fact that the patient took the eggs raw, while the others ate them cooked. He concludes, as a result of these experiments, that an alimentation even very rich in albumenoid matters causes no increase in the amount of albumen in the urine.—*Lyon Medical*, No. 38, 1886.

SUPRA-CLAVICULAR ADENOPATHY IN CANCER OF THE STOMACH.—The presence of swollen cervical glands is sometimes an indication of cancer of the œsophagus, lungs, pleura, or other inter-thoracic organs, but it is not generally recognized that a supra-clavicular adenopathy may be present also in cancer of the stomach. Several German and French writers have recorded instances of this kind, however, and more recently M. Troisier related three cases at a meeting of the Hospitals Medical Society of Paris (*Concours Médical*, October, 16, 1886). In two of the cases an autopsy could not be made, but the clinical history left no room to doubt the correctness of the diagnosis. In the third case, cancer of the large cul-de-sac and pyloric end of the stomach was found, but the œsophagus was not involved in the morbid process. The ganglia in the immediate neighborhood of the stomach were not degenerated, but those in the supra-clavicular region were manifestly cancerous. In each of these cases during life several enlarged and indurated, but not painful, glands were noticed in the supra-clavicular region of the left side, behind and to the outer side of the sterno-cleido-mastoid muscle. Some of the glands were isolated, others confluent; they were not adherent to the skin, but could be rolled like marbles under the finger.

CARDIAC DYSPEPSIA.—In a recent thesis on this subject (*La France Médicale*, October 14, 1886) Dr. P. Muller maintains that there are few affections of the heart which are not accompanied at one time or another by gastralgia, dyspeptic troubles, or even serious lesions of the stomach. In some forms of heart disease, especially in aortic insufficiency, dyspepsia is often the first, and for a long time the only, symptom pointing to the existence of valvular trouble. The gastric troubles of cardiac origin may be classed under three heads: 1. Affections of nervous origin associated most frequently with cardiac neuroses; 2, trouble due to visceral anæmia (gastralgia), occurring more especially in aortic valve lesions; 3, congestive disorders, the type of which is the dyspepsia of mitral disease. In the treatment of cardiac dyspepsia due regard must be had to the probable pathogenesis. In the reflex dyspepsia of neuroses of the heart, washing out the stomach, which is an excellent sedative of the visceral nervous system, might be tried. In the other form recourse must be had to the ordinary eupeptics, but the use of remedies directed to the heart should not be omitted. In the gastric congestion consequent upon mitral disease, the cardiac tonics, such as digitalis, convallaria, and caffeine, will be of service if they can be retained. In aortic disease, on the other hand, opium and nitro-glycerine will do more good. M. Huchard has recommended a dry regimen in dyspepsia symptomatic of certain general diseases in which there is increased vascular pressure, and this might be advantageously insisted upon in certain forms of cardiac dyspepsia.

SALT BATHS IN FEVERS.—Dr. Ravinovitch has made a number of experiments in cases of typhoid fever to determine the relative value of salt- and fresh-water baths, and formulates his conclusions as follows (*Meditsinskoye Obozreniye*, No. 14, 1886: 1. Salt baths reduce the temperature several tenths of a degree Centigrade more than ordinary baths; 2, the difference in the abstraction of heat is greater the first half-hour, gradually becomes less, and is hardly noticeable at the end of three hours; 3, evening baths reduce the temperature in a greater degree than do those given in the morning; 4, salt baths retard the pulse more than ordinary baths, and, 5, they also reduce the number of respirations per minute, rendering the inspiratory efforts deeper and more prolonged; 6, salt baths increase the muscular strength in a greater degree than do fresh-water baths; 7, the patients feel better while in the salt bath and after its termination than they do when a fresh bath is given; 8, the difference between salt and fresh baths, as regards the slowing of the pulse and respiration, is not so great as to indicate any very powerful influence of salt baths on the functional activity of the heart and lungs.

OSTEOTOMY OF THE NOSE.—At the meeting of the French Association for the Advancement of Science, M. Viennois gave a detailed description of an operative procedure adopted by M. Ollier in the removal of naso-pharyngeal polypi or of other tumors of the nasal fossæ. The procedure, which has for its object the obtaining of more space for work, consists in detaching the nose at its root and sides by two incisions following the naso-genial crease, and folding it down over the chin. If necessary, the septum may also be resected. After the removal of the tumor the hemorrhage, if any occur, can be readily controlled by pressure with sponges soaked in Pagliari's fluid (tincture of benzoin, alum, and water). After the flow of blood has definitely ceased, the nose is to be returned and kept in place by sutures. It readily reunites, and the author maintains that there is no danger that loss of vitality will ensue.

THE PROPER USE OF ERGOT IN OBSTETRICAL PRACTICE.—Dr. F. H. Potter closes an elaborate paper with the following points for consideration: 1. Ergot is a drug which, in any of its preparations, tends to deteriorate rapidly, and should never be used except when prepared from a pure and fresh specimen. 2. It is a stimulant to the tubular and non-striated muscular structures of the body, causing them to contract. 3. It acts especially upon the muscular structure of the uterus, throwing it into a state of tonic spasm. 4. Its action on the uterus is, however, uncertain; sometimes it contracts the entire organ, at others only a small part of it. 5. If the entire organ is contracted, labor may be delayed through the rigidity of the os, and the child destroyed by the interference of the placental circulation. 6. Or the contraction may be so powerful as to force the child at once into the world, causing any or all of the lacerations of the soft parts of the mother. 7. The life of the child may be endangered, also, through absorption of the essential oil of ergot. 8. If given after the birth of the child, and before the expulsion of the placenta and membranes, it may prevent the removal of the latter, and thus be indirectly a cause of puerperal septicæmia. 9. It may act in a similar manner in cases of abortion, actual or threatened, and cause a similar result. 10. The proper use of ergot in obstetrical practice is limited to those cases in which, after the expulsion of the placenta, the uterus refuses to contract, or, having once contracted, shows a tendency to secondary relaxation. Even in these cases, however, reliance should not be placed upon it alone, but its action should be supplemented by the other means used to provoke uterine contraction.—*Buffalo Medical and Surgical Journal*, September, 1886.

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NORTHERN CALIFORNIA AS A HEALTH-RESORT.

IN speaking of California as a health-resort the mind naturally reverts to the southern portions of the State, and we know of no places to the north of San Francisco which have acquired any extended reputation as resorts for invalids with threatened or actual pulmonary troubles. Yet it would seem that some portions of the State bordering on the Oregon boundary are deserving of a more careful study as regards their climatology than they have hitherto received. In a report on the climatology and diseases of Surprise and Goose Lake Valleys, presented to the California State Board of Health by Dr. George M. Kober, U.S.A., we find some data which may be of use in estimating the probable value of these places as health-resorts.

These valleys lie in Modoc County, one on either side of the Warner Mountains, Surprise Valley being the more easterly. This valley is bounded by low mountains on the east and high mountains on the west, while the reverse obtains in Goose Lake Valley. Both valleys contain numerous alkaline thermal springs, which may be found to possess valuable properties in the treatment of rheumatic affections, although as yet no analyses of the waters have been made. The thermometric observations of Surprise Valley extend now over a period of twenty years. The mean temperature for this time, was 50.3° F., the highest temperature observed at any time was 100° F., and the lowest 19° F. below zero. A striking peculiarity of the climate is the extreme range of temperature, particularly noticeable during the summer and fall months. A daily range of 50° is not uncommon, and even a daily range of 62° has been observed in August. During the dry season the amount of precipitation is hardly appreciable, whole months often passing without a shower, and dew being rarely, if ever, observed. The rainy season is fairly well defined during the winter and spring, the amount of precipitation in the form of snow being sometimes excessive. The prevailing direction of the wind is from the south and west, and while it is rarely violent in force yet a gentle breeze is almost always observed. The town of Fort Bidwell, where these observations were taken, is situated in latitude 42° 10′ north, longitude 43° 12′ west. The climate of Goose Lake Valley is similar to this, except that there is usually a greater fall of snow.

An estimate of the prevalent diseases of this region may be formed from a study of the sick report of the garrison of Fort Bidwell. Dr. Kober has prepared a table from the sick reports for the past sixteen years, from which it is seen that catarrhal affections of the alimentary canal and air-passages are the most frequent, and then follow, in order, rheumatism, malarial fevers, tonsillitis, and neuralgia. Of the cases of malarial fever, most, if not all, were imported, the men having acquired the disease at other posts before being sent to Fort Bidwell. The absence of typhoid fever and other zymotic diseases among the troops was noteworthy, as these diseases occurred with some frequency among the civilians living in the neighborhood of the post, whose neglect of all sanitary laws was painfully apparent.

Although catarrhal affections are common in Surprise Valley, as might be expected from the meteorological conditions there present, yet pneumonia and pulmonary phthisis are practically unknown. In sixteen years, at Fort Bidwell, there were but nine cases of pneumonia; and Dr. Forrest, of Alturas, reported that he had neither seen nor heard of eight cases in as many years. Consumption is also one of the rarest of troubles in that region. Only three or four cases are known to have originated there, and in some of those the inception of the disease could be traced to an injury, and the cases were probably not of a tubercular nature. But the climate would appear to be ill-adapted to those in whom pulmonary tuberculosis is already established, for the great and rapid variations of temperature seem to contribute to an acceleration of the morbid process.

As far as can be determined from this interesting report of Dr. Kober, a few points only of which we have briefly touched upon, it would appear that the climate of Northern California offers certain advantages in the prophylaxis of pulmonary phthisis which other warmer and moister climates do not possess. But it should be remembered that a tubercular process already established will probably be rendered only the more active if the patient seeks this region. The country around Surprise Valley, if it ever become a health-resort, will be one for prophylaxis and not for the treatment of pulmonary disease already established.

THE GALVANO-CAUTERY AND CHEMICAL GALVANO-PUNCTURE IN GYNECOLOGY.

FOR several years Dr. G. Apostoli, of Paris, has been engaged in applying electricity to the treatment of various uterine and peri-uterine disorders. He has some very positive views about the value of this agent, and he has also devised some new methods of using it.

In the *Nouvelles Archives d'Obstetrique et de Gynécologie*, for September, Dr. Apostoli announces under the head of "A New Treatment for Chronic Metritis," the "therapeutic consecration" which he has given to his researches regarding the application of the galvanic current to the interior of the uterus in strength sufficient to destroy the mucous membrane. The article in question shows simply that M. Apostoli has worked out the question of the use of galvanism as a caustic, in place of the more ordinary chemical and mechanical application. The writer says that for this purpose an absolute galvanometer is needed, and he uses a special one which can

register 100 to 200 millampères. This amount of electricity is found necessary. A battery of from forty to fifty Leclanché cells is sufficient to furnish the current. The electrode is made of platinum, of the size and shape of a uterine sound, insulated with celluloid. The negative pole is the one applied.

In *L'Union Medical* for October 16th, the same author begins a series of articles on "Chemical Galvano-Puncture in Gynecology." This consists in the application of a galvanic current introduced through a trocar. The trocar is plunged through the skin or mucous surface, into the part which it is desired to affect. The electrode is then passed in through this. The resistance of the skin being thus done away with, remarkable chemical and mechanical effects can, it is claimed, be achieved. The "galvano-puncture chimique" is indicated in "certain uterine fibromas, certain forms of chronic metritis, certain intra-uterine polypi, certain unilocular ovarian cysts, chronic phlegmons of the broad ligament, subacute and chronic posterior perimetritis hæmatocele, and extra-uterine pregnancy."

THE ANATOMY OF THE MALE URETHRA.

Some new observations have recently been made concerning the anatomy of the male urethra, by Dr. O. K. Newell, of the Harvard Medical School. They have especial bearing upon the operation of endoscopy, litholapaxy, and catheterization.

Dr. Newell had, he tells us, been accustomed to use the small endoscopic tube, but the results of his efforts therewith were extremely unsatisfactory. He had made a tube No. 30 in size, and with the assistance of an ordinary laryngeal mirror the surfaces of the urethra, and even bladder, were easily seen. His first examination with the new instrument was made on the cadaver. Any small body *in situ*, such as a tack, piece of sponge, etc., was easily seen and recognized. A No. 30 tube will carry a body of considerable size, and it is easily possible with this calibre to see into the bladder. The first tube used by Dr. Newell had the length of an ordinary catheter. It was cut off at the visceral end obliquely, at an angle of forty-five degrees. The latter was at first closed with thin glass, but later left open, with a guide passed for its introduction. The object of the glass was to enable the tube to be placed against the bladder-wall, and to keep out the urine. Of course, the shorter the instrument the better the view obtained.

"I find," the investigator writes, in the *Boston Medical and Surgical Journal*, "that an instrument, sound, catheter, or evacuating-tube, having a length of five inches or more, can be readily introduced through the urethra into the bladder of any normal subject, the requisite manipulation being but little more difficult than that required in the introduction of an instrument having the traditional measurement. The pendulous portion of the urethra—the part anterior to the triangular ligament—can be readily folded together so that its long axis occupies not more than from one and one-half to two inches. I have found no case where an endoscope six inches in length could not be introduced into the bladder so as to have two inches or more protruding from the visceral orifice."

The average length of the prostatic urethra is about one inch and a quarter; that of the membranous portion about three-quarters of an inch. "An enlarged prostate seldom increases the length of this part to any great degree, the growth being more lateral and affecting more its calibre and direction." "We have, then, in the male subject, a urethra, a portion of which averages two inches in length, and presents beyond this as its continuation a canal, which, from its anatomical structure and that of its surrounding parts, is readily folded together so as to have the same length, the variation in different individuals when the urethra is thus apposed being of no considerable degree." Its surgical length is then practically only four inches, or, in case of enormous hypertrophy, only six.

Dr. Newell uses for his examinations, as we have said, a No. 30 tube. It is obliquely open at its visceral end. Inspection is possible in all directions by the protrusion of the bladder-wall or mucous membrane into the tube orifice. It is possible to introduce instruments through an endoscope to aid in the removal of foreign bodies. In preliminary examinations it is preferable to use a fenestrated tube, as the mucous membrane with its vascular supply is much better seen in the full bladder. In an empty bladder an open tube may be used, and its inner surface dried with cotton. For exploring the bladder full anæsthesia is necessary; for urethral inspection cocaine may suffice. Dr. Newell suggests that the tube, used as a trocar cannula in abdominal or thoracic puncture, might enable us to examine the interior of these cavities.

In litholapaxy the application of this new principle will enable us to reduce the distance between the orifices of the "combined" tube in present use from fifteen and three-fourths to ten inches.

Straight tubes have the decided advantages that they can be more easily kept clean and free. The rapidity of evacuation is greater in litholapaxy. A short catheter may be used for vesical irrigation, and a more thorough washing be possible.

THE REV. JOHN WESLEY AS A PHYSICIAN.

We have come into possession of a book entitled "Primitive Physic; or, An Early and Natural Method of Curing all Diseases," by John Wesley, M.A., the first edition of which was issued in 1747, the twenty-second in 1788. He takes a theological view of disease, and says that man, when he first came out of the hands of his great Creator, was immortal and incorruptible in body as well as soul: there were no seeds of dissolution or disease in him. With the advent of sin came weakness, pain, sickness, and death. The great antidote to many diseases is contained in the curse: "In the sweat of thy face shalt thou eat bread;" for the power of exercise, both to preserve and restore health, is greater than can be conceived, especially in those who add temperance thereto. Primitive physic, however, Wesley declares, was not divined, nor scientific or philosophical, but was, and always should be, accidental or experimental. "Thus a man who was walking in a grove of pine trees, when many in his native town were afflicted with a new kind of distemper or sores [diphtheritic?] in the inside of the mouth, a drop of the natural gum fell from one of the trees upon the book he

was reading. He took this up and applied it to one of the sore places in his mouth, and finding the pain immediately cease, he applied it to another, which was also presently healed. This remedy he imparted to others and it did not fail to heal any that applied it. Thus numberless remedies have been casually discovered in every age and nation. Hence ancient men, by the aid of experience and common sense, impelled by ordinary humanity, cured both themselves and their neighbors without the intervention of learned doctors. But in the process of time, men of a so-called philosophical turn of mind were not satisfied to cure in this simple and rational way, but began to inquire how medicines wrought such effects, and to examine the human body in all its parts, and gradually inverted the whole order of physic. Men of learning began to set simple experience aside and to build up medicine on theories and hypotheses; to form theories of disease, and to endeavor to cure these notions rather than the disease. As theories increased, simple medicines and ordinary experience were more and more disregarded and disused. In some of these an abundance of new remedies were introduced by reasoning and speculative men, and rules for the application of these were immensely multiplied till physic became an abstruse science quite out of the reach of ordinary men. Physicians began to be held in admiration as extraordinary persons, and even something more than human, like clergymen. And profit attended them as well as honor, so that they had two weighty reasons for keeping the bulk of mankind at a distance and in ignorance. They filled their writings with a host of technical terms utterly unintelligible to plain men; they delivered their rules and reasoned upon them in an abstruse manner. They said that a critical knowledge of anatomy, natural philosophy, chemistry, and what not, was necessary to the art of healing. Those who only knew how to restore the sick to health they branded as Empirics. They compounded their medicines with so many ingredients that the common man could not know which one effected the cure; and used chemicals and exotics which he had neither skill, money, or time to prepare, and also such powerful and hazardous ones that the unlearned man could not use them except by the advice of a physician. Thus the high honor and great profit of physicians were secured and a vast majority of mankind were utterly cut off from helping and curing either themselves or neighbors, or even attempting it."

Wesley continues: "Is it not needful in the highest degree to rescue men from wasting their fortunes, from pining away in sickness and pain through the selfishness and dishonesty of physicians; yea, and many times throwing away their lives after their health, time, and substance." He writes his book because doctors' books are too dear for poor men to buy, and too hard for plain men to understand; they do not contain only safe, cheap, and easy medicines, but many that are dear, farfetched, and consisting of too many ingredients. Their method of compounding and decompounding medicines can never be reconciled to common sense. Experience shows that one medicine will cure most disorders, at least as well as twenty put together. Why, then, do the doctors add the other nineteen? Only to swell the apothecary's bill and to divide the spoil."

Wesley says he has given a short description of many diseases by which it is very easy for every one to know the one he is afflicted with. He has given several or more remedies for each disease, and marked those which are thought infallible with a big I. Those which are well-proven with *Tried*, etc. If all these fail, then call in "a physician who fears God," not before.

Wesley's book is made up largely from the old herbalists, of course, but he relies largely upon Sydenham, Boerhaave, Cheyne, Lind, Tissot, and others of equal merit. He also says, because they are not safe, but extremely dangerous, he has omitted antimony and those four Herculean medicines, opium, bark, steel, and quicksilver. "How many fatal effects," he says, "have these produced even in the hands of no ordinary physicians? They are far too strong for ordinary men to meddle with." But in reading the book through we find all these heroic remedies recommended, and in no stinted quantities. Thus "for *an ague*, ten to twenty drops of laudanum in two drachms of syrup of poppies. *In a fit of apoplexy* put a handful of salt in a pint of water and if possible pour it down the throat of the patient; he will quickly come to himself; if he does not, send for a good physician who fears God; in the meantime let two strong men carry him upright about the room or give a vomit of three grains of tartar emetic and blow white hellebore up his nose.

"*For an asthma*, take *an ounce* of quicksilver every morning and put an ounce of ether in a quart of boiling water and let him inhale it.

"*For bleeding at the nose*, apply tents made of soft linen dipped in cold water strongly impregnated with *tincture of iron*, and introduced within the nostrils and pushed quite through to their posterior apertures. A *cancer* of thirteen years' standing was cured by applying poppy-water, plantain, and rose-water mixed with honey-of-roses; but Mrs. Bates, of Lancashire, was cured of a cancer of the breast, a consumption, a sciatica, and a rheumatism, which she had had for near twenty years, by bathing daily for a month and drinking only cold water. If this fails apply *goose-dung* and celadine; they will both *cleanse* and heal the sore; or, rub the whole breast night and morning with hartshorn and oil.

"*For a cancer of the mouth or throat*, blow in the ashes of scarlet-cloth; it seldom fails.

"*For whooping-cough*, give three to five grains of gum-gamboge; it vomits and purges, and always cures.

"*For chapped hands*, wash them in flour of mustard.

"*For a colic*, take thirty or forty drops of oil of anise on a lump of sugar.

"*For colic in children*, put one grain of tartar emetic in six tablespoonfuls of water. One teaspoonful will puke a child one week old, and a large teaspoonful is sufficient (!) for a child one month old. Repeat this puke every day. This is perhaps the best medicine yet discovered for infants (!!). It speedily cures inward fits, gripes, looseness of the bowels, thrush, and convulsions in children" (!!!). Herod knew nothing about it.

"*For an hysteric colic*, take twenty drops of laudanum in any proper clyster; it gives instant relief.

"*For a nervous headache*, take one ounce of quicksilver daily for a month. For a windy colic, *parched peas* eaten freely have the most happy effect, when all other means have failed.

"*For a consumption*, eat cow-heel soup, and every morning cut up a turf of fresh earth and, lying down, breathe into the hole for a quarter of an hour. I [Wesley] have known a deep consumption cured thus. But Mr. Masters was so far gone in consumption that he could not stand alone. I advised him to lose six ounces of blood every day for a fortnight, if he lived so long, and then every second day, and third day, and fourth day, and fifth day for a fortnight each. In three months he was well. In the last stages suck an healthy woman; this cured my father.

"*For a cough*, chew Peruvian bark; it seldom fails to cure any cough. I earnestly desire any one who has any regard for his health to try this within [twenty-four hours after he first perceives a cough.

"*For deafness*, put a little salt in the ear.

"*For diabetes*, infuse half an ounce of cantharides in a pint of elixir vitriol, and take fifteen to thirty drops three times a day.

"*For a dropsy*, eat a crust of bread every morning; or be electrified. Jane Roberts' skin cracked in many places, and she drank small beer and thin milk, and continued drinking and leaking until her dropsy was quite well; a man drank six quarts of cider daily, and got well of a dropsy supposed to be incurable.

"*For a bloodshot eye*, blow in fine white sugar-candy; for dull sight drop in the juice of rotten apples, often. For *films* of the eye blow in *stercus humanum* finely powdered; it is well to call it *sibethum occidentale*. For white specks on the eye put in a little ear-wax every night.

"*For epilepsy*, be electrified; take five or six drops of laudanum every morning; this has cured many; blow powdered ginger up the nose.

"*For falling of the fundament*, apply a cloth covered thick with brick-dust." Both are red.

"*For falling of the womb*, wear a pessary of cork and drink twice a day a teacupful of the decoction of bark, with ten drops of elixir vitriol.

"*For extreme fat*, live on turnips, carrots, and other roots, with some bread and drinking-water.

"*For a fever with delirium*, apply a treacle plaster on the top of the head.

"*For a fistula*, put an ounce of *corrosive sublimate of mercury* in two quarts of pure spring water, and shake it well every hour for six days; put half a spoonful of this in a large vial with two spoonfuls of water; shake them well together and drink it, fasting. It works both by vomit and stool; do not eat or drink anything for two hours after it has done working. Take this every day, and in forty days you will be well and also cured of any cancer, or old sore, or king's evil, broken or unbroken. A very weak person should not use this, but I [Wesley] have known it used safely and successfully." This is about one grain of corrosive sublimate per dose. The dilution and shaking reminds one of Hahnemann, who was an excellent English scholar, and delighted in such books as Wesley's. The curious part is the corrosive sublimate is extremely soluble, and does not require shaking every hour for six days, except to develop some mysterious electrical power called out by shaking.

It is to be hoped that Wesley's theology was not as strong nor as shaky as his physic.

News of the Week.

THE WIDELY-ADVERTISED MIND-READING of Mr. W. I. Bishop, in Boston, lately, turns out, according to the *Boston Medical and Surgical Journal*, to have been only an illustration of muscle-reading, after all.

THE PROMOTION OF CATHOLICISM BY MEDICAL MEN.—According to the *Virginia Medical Monthly*, there is a society called the Guild of St. Luke, Evangelist and Physician, whose object is to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy.

PLACARDING HOUSES CONTAINING CASES OF INFECTIOUS DISEASE.—The *Weekly Medical Review* says: "The Health Department of St. Louis is fully alive to its duty. During the past month the Health Commissioner has adopted a plan of placarding houses wherein cases of diphtheria, scarlet fever, and other contagious and infectious diseases exist. This is proper, as it warns the public against unnecessary visiting and exposure." On the contrary, experience has shown that such practice is resented by householders as an invasion of personal rights, and leads to concealment of disease.

GASTROSTOMY FOR A KNIFE.—Dr. Berneys, of St. Louis, recently extracted a silver-plated knife by gastrostomy.

THE DEATH OF PROFESSOR ALBERT BURCKHARDT-MERIAN, Professor of Otology at Bâle, is announced.

THE TERRA COTTA COFFIN is the latest reported luxury. It makes a case of earth to earth.

A HEALTHFUL PLACE for white people is Tennessee, the mortality-rate being only 13.44 per 1,000 annually.

THE CENTENNIAL ANNIVERSARY of the College of Physicians of Philadelphia will be celebrated on January 3d and 4th. The Society's building has recently been enlarged by the addition of a story, for the accommodation of the united museums.

QUACKS AND THE DAILY PRESS.—An interesting illustration of the way in which quacks get a hold upon the press, and even the Associated Press agents, is furnished in the case of a Toronto quack who was recently tried for a criminal assault. Exaggerated and sympathetic accounts of the said quack's position were telegraphed over the country, and the ingenious defendant even succeeded in getting in an announcement of his having a large and respectable practice.

DR. F. A. ERICH, one of the Faculty of the Baltimore College of Physicians and Surgeons, died of apoplexy at his residence, in Baltimore, on December 7th, aged forty-nine years.

THE STATE BOARD OF HEALTH.—Governor Hill has appointed ex-Senator Thomas Newbold, of Poughkeepsie, and Professor Maurice Perkins, of Union College, Schenectady, to be Health Commissioners to fill the vacancies in the State Board of Health caused by the death of the Hon. Erastus Brooks, and the resignation of Dr. Edward M. Moore, of Rochester.

THE NEW YORK MEDICAL COLLEGES.—The New York correspondent of the *Philadelphia Medical Times* writes that the new building for the College of Physicians and Surgeons will be completed and in use a year from now. The walls are up, and one can get a good idea of how the building will look when completed. The main entrance faces Fifty-ninth Street and Roosevelt Hospital; joining the two wings, one facing Fifty-ninth Street and the other Sixtieth Street, is the building containing the large lecture-room or amphitheatre. The structure is principally of a light-red brick. Not being wedged in between other houses, there will be a better opportunity for architectural effect than is possessed by some of our medical institutions. It is understood that the medical department of the University of the City of New York will commence erecting the laboratory, for which a donation of one hundred thousand dollars has been received, next spring. Bellevue has new and comfortable seats in its amphitheatre, together with a place under the seat to put one's hat. The arms are high, making it somewhat inconvenient for taking notes during the lecture. It is a noticeable fact that our medical colleges have not a free coat-room; hence the unseemly stacks of wearing apparel in the lecture-room. Our medical colleges start out with even more than their usual number of students. At the College of Physicians and Surgeons about seventy more are enrolled than at this time last year, and at the University about fifty more, while Bellevue has its quota. One of the requirements for graduation at Bellevue is a course in the Carnegie, or some other pathological laboratory, including the study of pathological and histological anatomy and the examination of the urine. At this college Dr. Janeway fills the position made vacant by the death of Dr. Austin Flint. At the University, Surgeon Billings, U.S.A., lectures on hygiene in October; the Chair on Physiology in this college having been left vacant, lectures in that branch will be delivered by Dr. W. C. Thompson and Dr. E. J. Bartlett; Dr. W. M. Carpenter has also been put down for a medical clinic in January; Professor R. A. Witthaus fills the Chair on Chemistry. At the College of Physicians and Surgeons Dr. Geo. L. Peabody fills the place of Professor Edward Curtis on Materia Medica; Professor Tuttle lectures on Gynecology, and the names of Dr. W. T. Bull and Dr. R. A. Hall appear, in connection with those of Professors Markoe, Sands, and Weir, in the department of surgery.

BEQUESTS TO HOSPITALS.—The late John C. Minturn, of this city, bequeathed $5,000 to St. Luke's Hospital; $5,000 to the Northeastern Dispensary; $5,000 to the Home for Incurables, and the same amount to the New York Infirmary for Women and Children.

SUICIDE OF A MEDICAL STUDENT.—A student of Jefferson Medical College, the son of a prominent physician in Western Pennsylvania, shot and killed himself December 4th. The suicide is said to be the result of overstudy.

A FREE HOSPITAL FOR SICK ANIMALS.—The sum of $70,000 has been bequeathed by Mrs. Ryess, of Pennsylvania, for the purpose of establishing in Philadelphia a hospital for sick animals.

PLASTER MULL.—The name of plaster mull has been given to a dressing consisting of a very thin sheet of gutta-percha, coated on one side with an adhesive substance containing one or more medicinal compounds, and backed on the other side with mull or undressed muslin. The name of salve mull also has been given to a similar kind of dressing, in which the medicaments are of a more soothing character, consisting of ointments having a basis of suet and lard spread upon mull. The local application of strong salicylic acid "plaster mulls," says the *Therapeutic Gazette*, is strongly recommended by Unna in the treatment of lupus.

SUPERVISION OF MEDICAL STUDENTS.—Professor Billroth, of Vienna, has joined the number of German professors who have lately spoken of the necessity of stricter supervision of the university students. He writes, with particular reference to students of medicine: "Sad experiences and observations naturally suggest the thought that our young men are not ripe for the degree of freedom prevailing in our universities. It is to be hoped that by tightening the pedagogic reins some improvement may be effected; the protest of the apostles of freedom surely ought not to be heeded. I would not favor a daily roll-call, but if, for instance, every clinical student had to appear four times instead of once at the practical demonstrations, and should mercilessly lose a semester by his absence when called out of turn, perhaps the students would attend the clinical lectures more frequently." In this country, the system of turning out doctors in forty weeks makes things so lively that our students do not need much supervision.

VETERINARY WORK FOR PHYSICIANS.—We have at previous times commended to our readers some such sentiments as are expressed below by *The Live Stock Journal*: "The provision for treating human ailments is altogether beyond the requirements. Perhaps there is no calling more completely overcrowded. But with vast sums invested in live stock, there are but a meagre number of those who are prepared to diagnose the ailments of domestic animals and treat them intelligently. If one-third of the graduates of medicine now before the public would add the leading veterinary works to their libraries, looking up the anatomy of the horse and cow—this would be a very simple task, because the tissues are the same, and named in the one case as in the other, the muscles being in pairs as in the human subject, and named after them—apply their physiology, the doctrine of digestion, circulation, generation, pathology, and the use and action of remedies, as they have learned these things in what would naturally be called the higher school, they would find a field before them to a great extent unoccupied, certainly not crowded. The graduate in human medicine would have at once a position accorded to him in the new field, while, in the present state of things, the opportunities for preferment, considering the extent of the competition, are meagre indeed." Many country practitioners have already acquired a good deal of veterinary knowledge, but, if we mistake not, it is very often expected that their skill be bestowed *gratis*.

"PRACTICE" is the title of a new monthly medical journal published at Richmond, Va., and edited by Dr. G. F. Winn.

Societies have been organized to meet almost every contingency in human affairs. The London Society "For the Prevention of Hydrophobia and the Reform of the Dog Laws" is one of the latest expressions of philanthropic effort.

A Fund of Fifty Thousand Dollars has been received by Cambridge University to be devoted to maintaining scholarships in pathology.

Australia also has its medical association, being organized as a branch of the British Medical Association. It has a membership of 4,700. It recently held its seventh annual meeting and resolved to petition the Government to make vaccination obligatory throughout the empire by imperial statute; also to restrict the privilege of private practice to medical men who have already served in a hospital; and, lastly, a request was preferred that a law should be made assigning substantial pensions to the widows and orphans of medical men who might meet with their death through attending to their duties during an epidemic. For a young society, it appears to us to want a good deal.

A Poor Field for Gynecologists.—The editor of the *South African Medical Journal* says that the ladies of South Africa are so sensitive and modest that it is very difficult indeed to persuade them to submit to a vaginal examination or local treatment. The editor has even been refused permission to auscultate the chest. He says: "We have been told by several up-country practitioners that they have perforce got into the way of treating all kinds of ailments, manifestly of an uterine character, solely upon subjective symptoms, through dread of the unpopularity that would ensue if they insisted upon physical examination."

"Der Deutsche Medicinische Verein von Philadelphia" is the name of a new society recently organized by the German physicians of Philadelphia.

The Medical and Chirurgical Faculty of Maryland and the Regulation of Medical Practice.—The Faculty in question has passed a resolution submitting to the Attorney-General of the State the question whether the Faculty's charter empowers it to regulate medical practice. This means, according to the *Maryland Medical Journal*, that the State Society will not, as a body, take further steps toward receiving regulation of medical practice. The *Journal* thinks that such action should spring from the profession as a body, and that the faculty should let it alone.

The Story of a New York Christian Scientist.—An enterprising Western widow became interested in the mind-cure. She worked it up a little in Chicago, then came East and went to Boston, where she took a course in Christian Science of a lady professor of that branch. Equipped with her certificates and letters she came to this city and established herself as a Christian scientist and mind-curer. She was a woman of energy, considerable intelligence and education, and much force of will. She gradually got patients to come to her, and, as every "cure" was a sensation, her patients increased in number until she became occupied all day. In a year she was making, perhaps, over $300 a month. Her methods were those of the "mind-curer," not the "faith-curer," between which two classes of therapeutists there are some fine distinctions. The patient and the "scientist" sit down together—perhaps facing each other. The patient remains passive, while the mind-curer, closing her eyes, proceeds to dispel the idea of disease, the morbid *daimon*, from the body of the patient. The séance lasts for, perhaps, half an hour, and is repeated *pro re nata*. The advantages of practising Christian Science are that when a cure is made, it is the talk of a dozen boarding-houses within a week. When cures do not result, the scientist explains that it is not the fault of the system, but that she, the scientist, is not strong enough. We learn that a college for Christian Science is to be incorporated, so that the license and registration law for medical practitioners need not cause any trouble. We trust that no such institution will be organized. Probably more than three-fourths of so-called "cures" relapse in a comparatively short time; and the general results of the mummeries of Christian Science are unqualifiedly bad.

The late Dr. Edward J. Darken.—At a meeting of the Medical Staff of the Demilt Dispensary, New York City, held December 7, 1886, the following resolutions were adopted:

Whereas, It has pleased an all-wise Providence to call suddenly from our midst our late friend and colleague, Dr. Edward J. Darken;

Resolved, That while recognizing that, in a peculiar manner, he was fitted to exchange this life for the next, we are, nevertheless, deeply conscious of the loss to this institution of one whose wisdom, experience, sound judgment, and eminent qualification for the important trust which he held for a period of twenty years, have been of inestimable value to the Dispensary, and have contributed in no small degree to its success.

Resolved, That in his death the State has lost a self-sacrificing patriot, a loyal citizen; the profession of medicine an ardent and accomplished member; this institution a sagacious and faithful executive; the poor, to whom he ministered with loving zeal, a large-hearted, generous helper, a wise adviser, a true friend.

Resolved, That we, both as a staff and individually, desire to bear affectionate testimony to the never-failing gentleness, brightness, and geniality of his disposition, and to the purity, sincerity, and heroism of his character; a heroism proven, indeed, during his distinguished military career, and then publicly acknowledged; but far more conspicuous and eloquent in the perfect patience and the steadfast equanimity with which he endured the unusual burden which, afterward, he was called upon to bear.

Resolved, That to his family we tender our cordial sympathy for the unspeakable loss which they have sustained.

Resolved, That a copy of this memorial be presented to the Trustees, with the request that it be placed upon the records of the institution, and that it be published also in the current journals.

Joseph E. Winters, M.D.,
Wm. M. Leszynsky, M.D.,
D. Bryson Delavan, M.D.,
Committee.

A LIVER WITH TWO GALL-BLADDERS was recently shown before the pathological section of the Academy of Medicine of Ireland.

LONDON HOSPITALS AND THE POOR.—London has only 90,000 paupers, according to its census, yet it treats in free hospitals 1,000,000 of patients annually, at a cost of $2,500,000. Its annual hospital deficit is $250,000.

THE POST-GRADUATE MEDICAL SCHOOLS are prospering. The secretary of one of the schools told me that they had on their list two ex-presidents of a State medical society and several professors in medical colleges. Their class, he said, is larger by a very considerable number than that of any previous year. Being asked whether they met with any opposition from the colleges which confer the degree of Doctor in Medicine, he replied, "Not in the least;" that they were on the best of terms. As they received only graduates in medicine, the only effect their attendance had upon the medical colleges was to diminish the number of matriculants at those colleges, not diminishing the number of their graduates.—New York Correspondent *Philadelphia Medical Times.*

Reviews and Notices.

THE MEDICAL NEWS VISITING LIST FOR 1887. Philadelphia: Lea Brothers & Co. 1886.

THIS very handy physician's companion appears this year in an improved form. The general arrangement of blanks for daily visits, clinical records, obstetric engagements, etc., is the same as in the first edition, but changes have been made in the lists of remedies and the therapeutic tables to bring them fully up to the times. The typographical execution and binding are excellent.

HOUSE PLANTS AS SANITARY AGENTS; or, The Relation of Growing Vegetation to Health and Disease. Comprising also a Consideration of the Subject of Practical Floriculture, and of the Sanitary Influences of Forests and Plantations. By J. M. ANDERS, M.D., Ph.D., lately Lecturer on Botany in the Wagner Free Institute of Science, Member of the Bureau of Scientific Information Academy of Natural Sciences, Chair of Forestry and the Relation of Plant Life to Health, Assistant Physician to the Episcopal Hospital, etc. Philadelpha: J. B. Lippincott Company. 1887.

THIS is a book of really unusual interest by reason of the novelty of its subject. The author is a lover of plants and flowers, and he pleads for their more general cultivation in our houses. Not only are they pleasing to the senses of sight and smell, but they are, he contends, of the greatest value as sanitary agents in purifying the close air of apartments during the winter months. The book is not a mere essay in which the cultivation of plants is urged on purely sentimental or even theoretical grounds, but it possesses a real scientific character. Most of the conclusions put forward are the results of a series of personal experiments extending over a number of years, and conducted with sufficient thoroughness to warrant the deductions drawn from them. One of the most interesting chapters is that upon the value of growing plants in the prophylaxis of pulmonary phthisis, and some striking instances are related of florists who were predisposed by heredity to consumption, who remained in good health as long as they continued in that business, but died of phthisis shortly after engaging in other pursuits. There is a chapter also containing many valuable suggestions on the care of plants, and on the various kinds best suited to grow in different parts of the house according to the degree of sunshine or shade present. Dr. Anders has succeeded in the difficult task of producing an enjoyable book, and one that can be read with profit by physician and layman alike.

OUTLINES OF THE PATHOLOGY AND TREATMENT OF SYPHILIS AND ALLIED VENEREAL DISEASES. By HERMAN VON ZEISSL, M.D., late Professor at the Imperial-Royal University of Vienna. Second Edition, revised by MAXIMILIAN VON ZEISSL, M.D., Privat-Docent for Diseases of the Skin and Syphilis at the Imperial-Royal University of Vienna. Authorized Edition. Translated, with Notes, by H. RAPHAEL, M.D., Attending Physician for Diseases of the Genito-Urinary Organs and Syphilis, Bellevue Hospital Out-Patient Department. New York: D. Appleton & Co., 1886.

To those familiar with German medical literature this work of Professor von Zeissl on syphilis needs no introduction. The author is one who has made a life-long study of venereal diseases, and he speaks with the authority of a master. He has also the happy faculty, which is nearly as essential in the writer of a book as is the knowledge of his subject, of expressing himself clearly and concisely in a way that all can understand, and he is fortunate in having had a translator who, while preserving the spirit of the original, has clothed the author's thoughts in good idiomatic English, free from the Germanicisms which so often mar translations of this sort. There are sections treating quite fully of gonorrhœa and chancroid and their complications and sequelæ, but the greater part of the work is naturally devoted to the consideration of syphilis. Special prominence is given to the pathology of the venereal diseases, though the subjects of symptomatology and treatment are by no means slighted. The translator has wisely refrained from adding too frequent notes, but those which he has made are useful and serve to increase the value of the work for American readers.

A GUIDE TO THE EXAMINATION OF THE URINE. By DR. WICKHAM LEGG.

THE present is the fifth edition of Dr. Legg's pocket-manual. It is one of the best of the many small works on urine analysis. It is brief, and yet complete enough for accurate work.

A LABORATORY GUIDE IN URINALYSIS AND TOXICOLOGY. By R. A. WITTHAUS, A.M., M.D. New York: William Wood & Co. 1886.

EXCEPTING a criticism of the word "urinalysis," we have nothing but praise for this volume. It is so compact that it can be easily carried in the pocket, and yet it contains all the essentials necessary for laboratory analysis. It opens endwise and every alternate page is left blank, so that copious notes can be taken. It deserves a large sale.

A MANUAL OF ANIMAL VACCINATION. By DR. E. WARLOMONT, Member of the Royal Academy of Medicine of Belgium. Translated by ARTHUR J. HARRIES, M.D., Assistant Physician to St. John's Hospital, etc. Pp. 152. Philadelphia: John Wyeth & Bro. 1886.

THIS manual discusses *seriatim* the theory of vaccination, methods of obtaining lymph and preserving the same, and the question of vaccino-syphilis. It is a fairly complete *résumé* of the whole subject.

CHICAGO MEDICAL DIRECTORY. Edited by ROBERT TILLEY, M.D. Pp. 178. Chicago: W. T. Keener. 1886.

THIS publication corresponds in scope to our own Medical Register, except that it recognizes the whole list of practising physicians, regardless of schools. It is attractively arranged, and seems very full and complete.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 2, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. J. BLAKE WHITE presented a specimen of

PHTHISICAL LUNG INJECTED WITH CARBOLIZED IODINE.

Intra-pulmonary injections in cases of phthisis had been the subject of three valuable contributions: One by the writer of the article in "Pepper's System of Medicine;" another by Dr. Beverley Robinson, of New York; and the third by Guggenheim, of Paris.

Dr. White had already reported a case of recovery under this plan of treatment, and the results which he had obtained by the method had verified his expectations.

The lung presented was the left from a male patient, forty-six years of age, who died six weeks after the administration of the third injection. He was an inmate of Charity Hospital and was in the third stage of phthisis, well advanced. In this case notable relief of symptoms followed the injections. The lung exhibited several cavities at the lower portion. The cavity at the apex, which had been injected, contained but a small quantity of pus when the lung was removed, and its walls showed a puckered appearance, which contrasted plainly with the fresh, ulcerating surface seen in the other cavities.

In general, the cough had been modified, the expectoration lessened, the night-sweats checked, and the local soreness about the cavity diminished by the injections in the cases in which he had administered them.

DR. W. P. NORTHRUP then read a paper (see p. 645) on

LARYNGEAL DIPHTHERIA—ITS PATHOLOGICAL ANATOMY, AND ITS TREATMENT BY INTUBATION.

The discussion was opened by DR. FRANCIS HUBER, who had intubated eleven times in advanced stenosis. Three cases occurred in his own practice and the remainder were seen in consultation. The symptoms which led him to introduce the tube were aphonia, stridulous expiration and inspiration, marked recession of the chest-walls, but especially cyanosis. He had performed tracheotomy twelve times, and saved but two patients. He had seen thirty-six other tracheotomies, and in not more than one-fourth of the cases did recovery follow the operation.

Dr. Huber then gave a brief outline of each case in which he had intubated. One child died sixteen hours after the insertion of the tube. One child coughed the tube out. The third child recovered. In the fourth case the dyspnœa and troublesome cough were at once relieved, and the child recovered. In the fifth case the child, three years and eight months old, died at the end of three days and a half of double pneumonia, with suppression of urine. The sixth patient died in uræmic convulsions. In the seventh case the removal of the tube was quite difficult and could be accomplished only when the stomach was empty. It was removed on the sixth day.

The eighth case occurred in a boy, three years old, who had mitral disease, with hypertrophy. Intubation gave complete relief, and the tube was removed on the sixth day. Two days later stenosis recurred, and later on slight pneumonia, but the child recovered.

The ninth case was that of a child, nine years old, in whom the tube gave immediate relief, and it was removed at the end of the fifth day, but, soon after, dyspnœa came on, with rise of temperature and suppression of urine, and death occurred twelve hours later from pulmonary œdema. The tenth was a recent case and would soon terminate fatally by pneumonia. The eleventh was one in which the child was practically moribund when intubation was performed, and death occurred four hours later.

Of the eleven cases the patients had recovered in four, which he regarded as a much more favorable showing than could be produced in the same number of cases of tracheotomy. All were advanced cases, and it was only a question of a few hours whether the child had any chance at all of life.

Dr. Huber also exhibited a modification of the O'Dwyer gag devised by Dr. Denhard, and which he thought was a valuable improvement.

DR. A. S. HUNTER said that his experience was limited to two cases, both of which he saw in consultation.

The first was a boy of six and a half years. He had been suffering from progressive laryngeal stenosis for two days and had a pulmonary complication, the physical signs of which were obscured by the stenosis. The temperature was 102½° F. The child was cyanotic and well-nigh asphyxiated. It was his first experience on the living subject. He had experimented several times on the cadaver. The tube was readily inserted in the second attempt. He was entirely unprepared for the phenomenon which followed. The child was dropped from the lap of Dr. Sandburn, of Bayonne, N.Y., who had called him, and stood between the doctor's knees. He looked about dazed. There was no cough, and the breathing so quiet that he failed for the moment to appreciate the fact that he *was* breathing, and so with the string pulled out the tube. It required three efforts to replace it; coughing followed for about five minutes, after which he continued to breath without obstruction until he saw him again forty-eight hours later. He was told that for twenty-four hours after its introduction his condition remained unchanged, then the temperature rose, the pulmonary complication increased, and the respiration became more rapid. Forty-eight hours after its introduction he was told that the patient had only taken a few teaspoonfuls of milk, because it made him cough. Dr. Hunter called their attention to the advantage of having him sit up when he took food, also directed that he be allowed to assist in holding the cup, and with but little difficulty, in three intervals of less than five minutes in all, he drank half a cup of milk and with less cough than with a single teaspoonful given previously. He believed it to be a good point to thus secure the attention and co-operation of the child when it is being fed.

Dr. Sandburn and Dr. Hunter now agreed that the patient had but a few hours to live, on account of the pulmonary complication, and as it had not coughed up any membrane, they thought that they might with safety remove the tube. It was done, and the patient continued to breathe with the same ease until it died seven hours later. The tube accomplished perfectly the object for which it was intended and in the most perfect manner, and, but for the pre-existing pulmonary complication, would undoubtedly have saved the child's life.

The second case he saw with Dr. Agan. The child was two years and a half old, and had been ill three days. It was cyanozed, and the temperature was 103° F. It was just recovering from measles, and had a complicating bronchitis. After inserting the tube the patient coughed from five to ten minutes. An hour later it commenced to play with its doll, and twenty hours later, while taking food, it coughed out the tube. Dr. Agan reinserted it one hour later; five hours afterward it died. The tube in this case also relieved the stenosis satisfactorily, and the patient might have recovered had no complication existed.

DR. E. L. PARTRIDGE referred to two points; the first, the fact that the presence of the thread in the fauces did not increase the severity of any of the symptoms; and second, the possibility of pushing softened membrane before the tube and obstructing the trachea, which could occur with tracheotomy as well as intubation.

Dr. Caille mentioned the fact that introduction of the tube could be very greatly facilitated by rehearsal upon the cadaver. He had introduced it once in the living subject, and was able to do it rather easily.

Dr. Huber does not remove the thread at once, but waits until complete subsidence of the cough.

Dr. Northrup was pleased to hear of the facility with which those who had spoken had been able to introduce the tube.

NOMINATIONS FOR OFFICERS.

The following nominations were made for officers: For president, Drs. A. Jacobi, Alfred L. Loomis, and John C. Dalton; for vice-president, Drs. E. D. Hudson, Jr., and W. H. Draper; for trustee, Dr. E. Herrick; for one member of the Committee on Admissions, Drs. Henry E. Crampton, W. E. Bullard, and R. C. M. Page; for one member of the Committee on Library, Drs. D. B. Delavan, T. E. Satterthwaite, F. P. Kinnicutt, and J. E. Janvrin.

NEW BOOKS.

The Committee on Library reported that Dr. C. R Agnew had obtained *eighty* dollars which had been expended in books on ophthalmology and otology and placed upon the shelves of the library.

The Academy then adjourned.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Conversational Meeting, held November 24, 1886.

In the absence of the President, Dr. William M. Welch occupied the chair.

THE CONTAGIOUSNESS OF SCARLET FEVER.

Dr. Arthur V. Meigs read a paper on the above subject (see page 650).

Dr. J. C. Wilson—The propositions submitted by Dr. Meigs have struck me with more than ordinary surprise. I have been in the habit of taking even a more extreme view of the contagiousness of scarlet fever than is commonly held by the profession. I think that any indorsement of the views submitted to-night, which are at variance with those generally held by the profession and by all writers upon this subject, should be made with extreme caution.

There are two or three points to which I deem it necessary to allude. In the first place it is useless for us to attempt to compare diseases, in regard to their degree of contagiousness, in which the mode of contagion is essentially different. No one would think of comparing the contagiousness of syphilis and the contagiousness of influenza. Nor do I think that the contagiousness of scarlet fever can any more properly be compared with that of whooping-cough. The infecting principle of whooping-cough is diffused through the air with great readiness. The disease may be contracted at a distance of several feet. On the other hand, there is every reason to believe from the recorded experience of the profession that the contagium of scarlet fever is very tenacious and is apt to linger, preserving for a long while its vital properties in clothing, furniture, and other articles about the patient. I think, therefore, that conclusions drawn from a comparison of these diseases in this respect are misleading. I have, in more than one instance, had several members of a household under my care suffering with scarlet fever at one time. And it has often happened, notwithstanding the most careful measures of protection, that two or even three members of a family have been affected at the same time.

I may here call attention to a case under my care last winter which bears upon several important points in this connection. In one family there are two children, about twelve or thirteen years of age. Two squares away a little friend was sick with scarlet fever. Six weeks from the beginning of the attack this child was convalescent, and was permitted to go out into Rittenhouse Square. There one of the two little girls before referred to met the convalescent child, shook hands with her, kissed her, and sat beside her in the open air for a few minutes. Five days later this child developed severe scarlet fever. Strict quarantine was established, and the second child in this family escaped the disease. Such a case simply proves that the disease is highly contagious, and that it is contagious for a long time, at least up to the period of desquamation. But it also shows us the far more important fact that the contagion is easily controllable, and that, under proper precautions, its spread in a household may be prevented. In a recent paper before the British Medical Association, Mr. Ashby, of England, held that in those cases where the disease was complicated by a purulent discharge from any source, the period of contagiousness is much protracted.

Even if up to the present time the contagiousness of the disease has been over-rated, the fear of it has been useful, and has saved lives which otherwise would have been sacrificed. In the absence of overwhelming proof that the disease is not as contagious as we have hitherto supposed, I think that we should await further knowledge in regard to the suggestions which the author of the paper has made. I am convinced that many unnecessary deaths occur as a result of the carelessness of the people and of the medical profession. So far from subscribing to the conclusions expressed, I take a diametrically opposite view of the subject, and I never fail to impress, in the most positive manner, the necessity of taking every possible precaution to prevent the spread of the disease, both in the household and outside of it.

Dr. William Osler—I must say that in certain features Dr. Meigs' experience tallies closely with my own. I think that there is among the laity in this city an unusual dread of scarlet fever. This no doubt arises in a large part from the unfortunate events that are liable to arise in connection with the disease, and from the natural severity of many of the cases. I agree with the author that in scarlet fever more frequently than in measles and whooping-cough a certain number of the children of a family remain exempt. In fact, I think that in any community there is a larger number of persons who throughout their lives are exempt from scarlet fever than there are of those who escape other contagious diseases. There are probably in this room several who have not had scarlet fever, although repeatedly exposed to it. My experience also agrees with his, that if early isolation is resorted to, the disease can often be kept from spreading to other members. It is well known that the contagious principle of scarlet fever has a more prolonged vitality and clings to clothing and other articles more tenaciously than the infecting principles of other diseases.

It is certainly strange that the disease is not more frequently carried by physicians, but I know of at least one instance of its conveyance by a physician. During my term as physician to the small-pox department of the General Hospital at Montreal, I attended a case of scarlet fever for a colleague, making two visits each day on three consecutive days. The evening visit was made just prior to my evening visit to the small-pox hospital. There was in the hospital at this time a child, eight or nine years of age, convalescent from a mild attack of small-pox. I invariably saw this child in the evening. Some days subsequently to my visits to the scarlet-fever patient this child developed the disease.

I would refer to one practical point in the prevention of the diffusion of the contagium of scarlet fever, and that is the careful inunction of the surface of the body with sweet oil. This is grateful to the patient, and I think diminishes the liability to the spread of the disease.

Dr. R. Bruce Burns—One reason that scarlet fever is less liable to spread than is measles or whooping-cough

is that in the former case the mother frequently isolates the patient even before the physician is sent for, while in the latter affections the same precaution is not always taken. It has been my experience that scarlet fever is a most contagious disease. There seems, however, to be a peculiar immunity in the case of nursing infants to all contagious diseases.

In 1883 an epidemic of scarlet fever occurred in a house. The mattress which had been used was afterward placed in the attic of another house which was freely ventilated. The following year the mattress was used by a child coming from Washington, and in a few days it developed the disease. As far as was known the child had not been exposed to the disease. It is my rule to isolate the sick person as much as possible.

In regard to immunity from the disease, I would say that I think that during the first year of life there is a certain degree of immunity. The greatest tendency to the disease is between the ages of one and fifteen years. After this age the tendency to the contraction of the disease diminishes rapidly.

I have never seen a case of scarlet fever occur in a household of children where the disease did not extend to all the other children under ten years of age, who were not protected by a previous attack, if exposed to contagion or in contact with the sick one. I once saw a family smitten with the disease lose six children in five days. Cases of scarlet fever occurring in adults are exceptional ones, and not the rule. This disease is strictly a disease of childhood.

Dr. James Tyson—The discussion of this subject is surrounded by all the difficulties which accompany the consideration of any subject which has two sides, and each side may be said to furnish exceptions. In considering it we must, as practical physicians, first take hold of those points which are generally conceded. One of these is the fixedness of the poison of scarlet fever—the property by which it retains its activity for an indefinite period. This has long been recognized, and numerous illustrations have been furnished of it to-night. Again, my own experience confirms that of the speaker, that the disease is readily isolated, and that, with proper precautions, it does not spread to other members of a family. I admit that there are exceptions to this, and these may justify the fear of the disease which is so prevalent. We must bear in mind that a single accident resulting from carelessness will more than counterbalance what seem to be unnecessary precautions.

I agree with Dr. Osler that there seems necessary a certain capacity for the taking of scarlet fever, and this is absent in some who, however much exposed, will not take the disease. I myself have never had scarlet fever, although I have frequently been exposed to the very worst forms of the disease.

Dr. Wharton Sinkler—It seems to me that there must be in individuals at times a susceptibility to scarlet fever which there is not at other times. We see persons who have escaped contracting the disease at one time but have been stricken down in a subsequent exposure. I agree with Dr. Meigs that it is unusual to have the disease run through an entire family. In regard to the susceptibility to the disease at one time and not at another, I may state that I know a physician who, at the age of over forty, after fifteen or twenty years of active practice, contracted a well-marked case of scarlet fever from a patient.

Dr. Charles Wirgman—Cases of scarlet fever in the early stage are sometimes brought to the dispensary of the Children's Hospital and the sufferers may sit with other children in the waiting-room, yet I cannot recall any instance in which another child has contracted the disease in this way. In private practice I have had many instances in which only one out of a family of five or six has been affected, but I recall instances in which four or five out of a family of six or seven have been stricken down with measles or whooping-cough.

In inunctions in scarlet fever I have employed butter of cacao, which is a clean and pure fat, cleansing and cooling.

Dr. William Pepper—I agree with Dr. Meigs that scarlet fever has a much lower degree of contagiousness as contrasted with measles, small-pox in the unprotected, and typhus fever. We know, however, that the disease is positively contagious, and that the contagium is extremely tenacious. I have had too many illustrations of the contagiousness of scarlet fever, and of the deadly results that may follow a neglect of the proper precautions, to have the slightest doubt as to the proper practical course to pursue. This is to me a purely theoretical and scientific question of great interest, but still only a theoretical question. I should consider myself as culpable if I were to allow a child who had not had scarlet fever to be exposed directly to the disease as I should if I permitted one unprotected by vaccination to be exposed to variola.

I agree with Dr. Meigs that we oftener find one case of scarlet fever in families of considerable size than we find single cases of measles. This may be due to the short period of prodromes. The early symptoms are so severe that the suspicions of the parents are at once aroused. In the other affections referred to the pre-eruptive stage is longer.

From the experience of some of the physicians who have spoken to-night, it is clear that an almost complete want of receptivity to this disease on the part of some persons exists. The practical rule in dealing with this disease should be the adoption of isolation as absolute as that employed in a case of measles, typhus fever, relapsing fever, or small-pox.

Dr. William S. Stewart—I indorse in general the sentiments expressed in the paper of the evening over a disease which is regarded with so much dread by our community. I think the distinction between the various types of the disease was not clearly defined, there being three forms, varying in their malignancy. I do not consider scarlatina as contagious as measles, but would rate the malignant form with that of diphtheria. In regard to the insusceptibility referred to by some of the speakers, I, too, have so far been exempt, although I experience a slight pharyngitis when attending a malignant case. I never have manifested much susceptibility to eruptive diseases, as I was the last of a family of seven who took the measles, and had but little eruption with the disease. I have frequently been vaccinated, but with no effect. Patients affected with scarlet fever should be promptly secluded from the rest of the family, and as much as possible kept secluded until all the desquamation has passed off and been destroyed. I have frequently found that the mother of a large number of children, who was obliged to be in the sick-room frequently and just as frequently commingling with the healthy ones, did not communicate the disease. I have also witnessed the fact that nursing-children were peculiarly exempt from attacks of scarlet fever when exposed.

Dr. Benjamin Lee—The long experience of the lecturer in the observation of the diseases of infancy and early childhood certainly entitles any opinions that he may advance to the most respectful consideration. The deductions at which a man arrives after years of practice, and which gradually crystallize themselves in his brain, carry great weight, even if they are not supported by the long columns of figures for the absence of which from his paper the lecturer has apologized. My own experience in this class of affections has necessarily been somewhat limited. So far as it goes, however, I think I can safely say that it corroborates every one of the clinical conclusions at which he has arrived. When we attempt, however, to compare the contagiousness of scarlet fever with that of other infectious diseases, three modifying circumstances must be borne in mind. The first, that which has been alluded to by the secretary, that this disease may often pass unnoticed. Probably every one of us

can recall more than one instance like that which he has described, in which we have said to ourselves, after listening to a recital of symptoms which have marked a slight illness—"That child has had a mild attack of scarlet fever which has escaped recognition." In this way persons are protected without knowing it. It is quite possible that the two gentlemen who have this evening described their condition as a want of receptivity, in reality present a condition of protection from an unrecognized attack in early childhood. Secondly, as has been acknowledged by all who have participated in the discussion, early isolation affords a much surer means of prevention of the extension of this than some of the other diseases referred to, because the period of greatest contagion is later. And, in the third place, I believe that the practice of inunction so much in vogue in the treatment of the disease is to a certain extent destructive of the virus present in the skin, and especially must this be the case when, as happens now so generally, some antiseptic is combined with the fatty matter used. As regards the final conclusion of the paper, however, I am compelled to take issue with the author. I am quite willing that we should all leave this hall to-night determined not to be alarmists. The physician should never be an alarmist. But the true way to quiet the fears of the anxious mother is not to discourage precaution, but rather by taking every possible precaution to be able to say to her: "Everything has been done that ought to be done. The probability is that the disease will not extend beyond the sick-room." I consider that it would be very unfortunate if any of us should be led by the reasoning of this paper to relax any of the precautions which he, as a physician, has been in the habit of employing; and if the daily press is to be believed, the present is not the most opportune moment for attempting to diminish the sensitiveness, either of the professional or the public mind, in this city on this subject. I should be extremely glad to learn from Dr. Cleemann, who is, I presume, in possession of the facts of the case, whether the published report was authentic or not. The case to which I had reference was that in which it was stated that a wedding had taken place, the bride being sick in bed with scarlet fever, and all of her six bridesmaids being present in the sick-room.

Dr. William M. Welch—My experience has been something like that of the author of the paper in regard to the spread of scarlet fever; but I prefer to explain this peculiarity in another way. I have always regarded scarlet fever as one of the most contagious of the exanthems, and have accounted for its failure to infect all persons exposed rather by the fact that many are, for some unknown reason, naturally insusceptible to the contagion. To prove that the contagium is exceedingly active I need only refer to the rapidity with which the symptoms of the disease appear after exposure. The ordinary period of incubation is only from four to seven days; but well-authenticated cases are on record in which this period was not longer than three hours. I have myself seen one case in which symptoms of the disease very quickly followed exposure. In the winter of 1871–72, there was in the Municipal Hospital a child suffering with confluent small-pox. The child recovered and was discharged, having been in the hospital for thirty-one days. The mother removed her one morning, and the same evening brought her back with high fever, and the next day a well-marked scarlatinous eruption appeared. In four days the child was a corpse. There was no case of scarlet fever in the hospital at that time, and it is hardly possible that the child received the contagium before she was taken sick with small-pox, and that it remained latent all that time. A more probable explanation is that exposure did not take place until after leaving the hospital, and that the incubation period was, therefore, of only a very few hours' duration. It is generally supposed that the contagium of scarlet fever is less volatile than that of other infectious diseases. I have, however, reason to believe that it is sometimes transmitted some distance through the atmosphere. Some years ago I was treating one or two cases of scarlet fever in a lower ward and a few cases of small-pox in the upper ward of the hospital. After a time the fever broke out among the convalescents in the upper ward. There was no direct communication between the two wards, except through the hot-air pipe. I think the contagium was conveyed in that way, for experiment showed that when the current of warm air was not very strong there was a tendency for the air of the lower ward to be drawn into the pipe.

A reasonable fear of scarlet fever is, I think, desirable; for if the child can be kept from the disease for some years, the chances are that he will either have it in a milder form or escape it altogether. The period of greatest susceptibility to the disease, and of its greatest virulence, is between the ages of two and four years. After that period of life it may be milder; and in adult life the susceptibility is often entirely lost.

It would be wise if in this disease greater caution were exercised in regard to funerals. The body should be washed with a disinfectant, and anointed so as to prevent the epidermic scales from being carried by the atmosphere. It is also of great importance that the clothing and bedding which has been in contact with the patient should be disinfected. Thorough boiling and washing will doubtless destroy the infection; but there are certain articles that cannot be treated in that way, and for the disinfection of such articles dry heat is necessary. I may state that a service of this kind has for some years past been carried on at the Municipal Hospital. Woollen clothing and bedding sent there for disinfection are subjected for some hours to dry heat at a temperature of 212° to 230° F. So far as we know, articles thus treated have never been the means of spreading the disease.

Dr. Arthur V. Meigs—In my paper I plainly stated that the fact of scarlet fever being a contagious disease did not admit of doubt. In any discussion, to be logical, we must first define the terms to be employed. At the present time there is the greatest confusion existing in regard to the meaning of words like contagion and infection. In Dunglison's "Dictionary," for instance, the terms are defined as synonymous. The "Dictionary" of the New Sydenham Society in its definition of these or parallel words makes the descriptions very brief, and gives the words simply their original etymological meaning.

A large number of individual instances have been related, but individual facts standing alone determine nothing; the only way to reach any conclusion is by the study of general results and what happens in most instances. I think the use of syphilis and influenza as illustrations of contagious diseases, as contagion is commonly understood, hardly applicable. These diseases are not typically contagious in the sense in which I have used that term. With reference to the precautions to be adopted, I have already stated what measures I advise. That certain persons are not susceptible to the disease is so well known that it is not necessary further to discuss the question. The susceptibility to scarlet fever doubtless varies at different periods of life and different ages, and that is another point in favor of the view that measles and some other affections are more highly contagious. I think the question of the contagiousness of scarlet fever is not merely a matter of theory and speculation, for we must, when we treat the disease, be able to answer the questions asked with regard to what shall be done to prevent its spread. It seems to me that when there is such a difference of opinion as exists in regard to the degree of contagiousness of scarlet fever, and such unanimity in regard to that of measles, it constitutes proof almost that scarlet fever is less contagious than the latter affection.

Adjourned.

Of the fifty-five signers of the Declaration of Independence, five were physicians.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE SOCIETIES—RUPTURE OF THE UTERUS—HEPATICO-BRONCHIAL FISTULA—DISSEMINATED MYELITIS IN COURSE OF MEASLES—ACUTE TUBERCULAR ULCERATION OF THE FAUCES—DEATH OF DR. FREDERIC FARRE—THE SOCIETY OF APOTHECARIES AND THE TWO ROYAL COLLEGES.

LONDON, November 13, 1886.

THE meetings of the medical societies during this week have proved rather sterile as regards subjects of interest. At the Medical Society of London on Monday evening Dr. Lewers read a paper on rupture of the uterus during gestation. This was rare, he said, as out of three hundred cases of rupture collected by Grāfe in his monograph on the subject only thirty-eight occurred during pregnancy. Deducting those cases in which the diagnosis had not been verified and those where rupture had taken place during premature labor, sixteen cases remained. Two of these were due to violence, and the remaining fourteen were instances of so-called "spontaneous rupture." Dr. Lewers suggested that spontaneous rupture during pregnancy was invariably due to interstitial pregnancy.

Dr. De Havilland Hall then read notes of a case of hepatico-bronchial fistula. Severe pain had occurred in the region of the liver, followed by jaundice. Vomiting of bright-colored bile took place, and bile was also discharged from the lungs while coughing. Recovery eventually ensued.

At the Medical and Chirurgical Society Dr. Barlow presented the notes of a case in which disseminated myelitis occurred during the eruptive stage of measles, and proved fatal on the eleventh day of the measles. The patient was a man twenty-three years of age, and was admitted to the London Fever Hospital on the second day of the rash. Dr. Barlow referred to the rarity of the case, and said it bore some resemblance to a fatal case of disseminated myelitis which Westphal had reported as occurring after small-pox. Dr. Cheadle referred to a case of cerebro-spinal meningitis which had followed measles almost as closely as the myelitis in Dr. Barlow's case. Drs. Abercrombie and Gay read a paper (prepared jointly) on three cases of acute tubercular ulceration of the fauces occurring in the course of acute tuberculosis. They regarded this form of tubercular ulceration of the fauces as only a part of the general tuberculosis, and considered that it differed entirely from the chronic tubercular ulceration of the fauces, which was either primary in the pharynx or spread there from the larynx.

The death is announced, at a ripe old age, of Dr. Frederic John Farre who, although for some little time retired, was well known to London practitioners, except the very youngest, as he was for many years a very prominent figure at the London College of Physicians. He had held most of the offices at that college. He rendered it very great service as treasurer, and was, at the time of his death, one of its vice-presidents. He was consulting physician to St. Bartholomew's Hospital, after having served the full term as physician.

A most important question arises out of the bearing of the new Medical Act upon the conjoint scheme. The two Royal Colleges have hitherto refused to allow the Society of Apothecaries to co-operate with them. They wish, in fact, to abolish the society. The new Medical Act, however, promises to give it fresh life, for it opens to the society a way to become a complete examining board and issue a license to practise in all departments. If the colleges will not give it fair play the society will no doubt do this, and their six-guinea diploma will be as complete a legal title to practise as the more dignified and more costly parchments of its wealthier rivals. When we are all talking about the over-crowded state of the profession, it seems most injudicious to open the door to a second competing qualification which will certainly be inferior, and which will no doubt be given to students, as heretofore, after the minimum period of hospital study. If an inferior grade of practitioners is introduced in this manner to flood the country, the real blame will be with the Royal Colleges, which have only just begun to really care for the general practitioners. Those who have lived long enough to look back for a quarter of a century remember the time when the Society of the Apothecaries was doing more to improve the education and status of the general practitioner than all the other corporations put together. When the College of Surgeons admitted members after one hour's examination in anatomy and surgery, only the society's examination was complete, except for the omission of surgery, in which it had no legal power to examine. The society was the first body to insist on a preliminary examination for medical students. Its fees have always been low—insufficient, in fact, to cover the cost of examination—but the benefit has been derived by the examinees. It can boast that it has never sold a diploma—even to a qualified man—a boast which the College of Physicians, with all its assumption of dignity, cannot make.

IS THERE AIR WITHOUT GERMS?—A REPLY TO DR. BALDWIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Since Dr. Baldwin "of course spoke figuratively" in declaring that there was "air without germs," an apology is due for my obtuseness in failing to recognize the metaphor. He now admits that there is a "germ in all air," and this question may be considered settled, unless he has again "spoken figuratively."

The rôle which these germs play is a question too broad for discussion here.

Regarding suppuration there are probably several, possibly many, varieties of bacteria which may produce it. Klemperer describes three.[1] That they are present in the atmosphere is shown by the fact that suppuration is the rule in wounds freely exposed. Is not suppuration a morbid process? The days of "laudable pus" are departed. No pus is to be lauded. Suppuration occurs, and pus is *not* a living tissue. But it *is* an excellent culture fluid, in which putrefaction and other bacteria grow and develop ptomaines, which by their absorption may and do lead to no end of mischief. Because they occasionally fail to operate as causes of wound-disturbance neither argues against their existence nor justifies a wanton exposure to their influence. There are many conditions, known and unknown, which make the causes of disease inoperative. For instance, out of ninety children exposed to scarlatina, forty-three contracted the disease and forty-seven escaped.[2] No one doubts the existence of scarlatinal virus in proximity to scarlet-fever patients just because more than fifty per cent. of those exposed escape. A much smaller percentage of wounds exposed to the air will escape suppuration.

But the climax of absurdity is reached when we are informed that the lamented Gamgee was right when, several years ago, he predicted the death of Listerism in a few years. Listerism dead! Why, at the International Congress at Copenhagen in 1884, there was not enough respectable opposition to Listerism to make a debate. The question was, how best to carry out its details. Its principles were considered established.

To one whose acuteness of perception can see noth-

[1] Annals of Surgery, June, 1886.
[2] Pepper's System of Medicine, vol. i., p. 494.

ing in Listerism but "hissing, bubbling, carbolized steam," there is little wonder that it seems dead. Those who can look beneath and see its underlying principles *know* that it is not dead. The principles which enabled Volkmann at one decisive step to change his results in compound fracture of the leg from a loss of twelve successive cases by pyæmia and septicæmia to one hundred and thirty-three cases without a single death from these causes still live.[1] It is strictly within the bounds of statistical facts to say that *many thousands* of persons are living to-day who but for Listerism would be dead. It has revolutionized surgery, and placed within the domain of safe operations surgical procedures which hitherto were almost uniformly fatal.

But what about M. Peter and his followers? M. Peter's paper was based entirely upon the able researches of M. Gautier, which had just been read before the Academy; and M. Gautier found it necessary, in the very next meeting of the Academy, to *repudiate M. Peter's construction of his views.* He finds no difficulty in reconciling the germ theory in "specific diseases" with the auto-genesis of ptomaines in arthriticus, anæmia, diabetes, etc. These and numerous other diseases no one assigns to a germ origin, notwithstanding Dr. Baldwin's assertion that "a special bacterium is claimed for *every disease.*"

But, pushing this theory of ptomaines in specific diseases to its logical conclusion, what is its bearing upon the germ theory of their origin? It ascribes these diseases to ptomaines. If germs produced ptomaines (which is absolutely certain), and the ptomaines produce the disease, then the disease is clearly due to germ infection. These ptomaines, as M. Peter says, are "absolutely topic." But the infection which results is not auto-infection, in the proper sense of the term, but microbial infection.

In my judgment Tait's success teaches a very important lesson which should be freely and honestly accepted. It is this: That the dangers from atmospheric infection are small as compared with the dangers of infection from instruments, hands, sponges, etc. No one practises "antisepsis" more rigidly than Lawson Tait does with his sponge and silk.[2] But his practice and results are no "irreparable blow" to the germ theory and disinfection, because his operations are *aseptic* with reference to the most frequent sources of infection, and *antiseptic* largely, because his operation wounds are small in extent and not exposed to the air for a long time; and because, finally, when his operation is completed, he leaves no gaping wound, the peritoneal cavity having been thoroughly cleansed and dried with *carbolized sponges.*

But while the dangers from atmospheric infection are far outweighed by those above referred to, they are no less real. And to expose an open wound-surface to these dangers for any great length of time (which Tait does not do in ovariotomy) is an act which, in the light of recent investigations, cannot be regarded with complacency.

And now a few words regarding "twenty-five successive cataract operations."

First, are cataract operations a proper test of Listerism? *Emphatically, no!* Fifteen years ago, when asked whether he thought much benefit might be derived from this method in ophthalmic surgery, the great founder of Listerism said he did not think so. The operations upon the eyeball are mostly small; the territory is so well protected that after the closure of the lids the conditions resemble pretty closely those of a pure subcutaneous operation; furthermore, the conjunctive sac is constantly bathed in an antiseptic fluid, the tears; there is little occasion to contaminate the wound with hands, dressing materials, or instruments difficult to keep clean; the operations are soon over and, therefore, exposed to injurious influences for a short time only. All this explains why the "results obtained by careful operations without the use of antiseptic agents have not been inferior to the results of those that have imitated the antiseptic methods of general surgery."[1]

Twenty-five successful cases of cataract extraction are undoubtedly creditable; but, in view of the long series published by Knapp and others, and the reasons above set forth by Lister, they cannot be considered a respectable groundwork for a philippic against antiseptic surgery.

Respectfully,

G. W. McCaskey, M.D.

Fort Wayne, Ind., October 30, 1886.

[1] Cheyne's Antiseptic Surgery, p. 506. [2] Diseases of the Ovaries, p. 26a.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.

To the Editor of The Medical Record.

Sir: Allow me to say a few words as to the place of quinine in typhoid fever.

In the Catskill Mountains, where they have the true typhoid fever, my experience was that typhoid fever could not be averted, or its natural course shortened, by large doses of quinine; that other than tonic doses harmed; that any preventive other than plenty of fresh air, bathing, and supporting treatment was hurtful. We could tell typhoid fever by the symptoms, not by finding in the blood and ejections the result of diseased conditions—a typhoid bacillus, as I think they call it.

In Dutchess County, where I have practised for fifteen years, I have never seen a case of true typhoid fever except in persons who have come here from some mountain region, *where there is no malaria*, and who have been taken sick soon after coming here. In those cases quinine in other than tonic doses did harm.

We have here the typhoid conditions as a result of malarious diseases, and those cases treated with large doses of quinine do well. I believe that the cases in New York City that have done well with large doses of quinine were cases complicated with malaria—the typhoid conditions—not true typhoid fever. But you say you found the typhoid bacillus. You can find maggots in a wound that is not properly cared for. Did the maggots cause the wound? Is not your typhoid bacillus the result of ulceration, of the death of certain parts which the fever poison has expended its force on? If there had been no death of parts would there have been any bacillus?

J. R. Wilson, M.D.

Poughkeepsie, November 20, 1886.

[The typhoid bacillus has been found, so far, only in cases of typhoid fever. Its presence is only of diagnostic value. The question whether it causes the fever has not yet been settled.—Ed.]

Agnew's Operation for Pterygium.—Dr. A. G. Sinclair, of Memphis, Tenn., writes to the *Mississippi Valley Medical Monthly:* In your September issue I find an article, by Dr. J. L. Minor, in which the method of operating for pterygium, the distinguishing feature of which consists of the *tearing* of the corneal portion of the growth from its attachments, is described as a *new* operation, and its introduction credited to Dr. Prince, of Illinois. I became familiar with this operation under the instruction of my friend and teacher, Professor C. R. Agnew, of New York, more than a dozen years ago, by whom it was taught and practised then, and has been ever since. In a recent letter from Dr. Prince he says: "To him (Professor Agnew) is due the credit of priority, which I would be glad to grant him." Honor to whom honor is due.

[1] Archives of Ophthalmology, March, 1886.

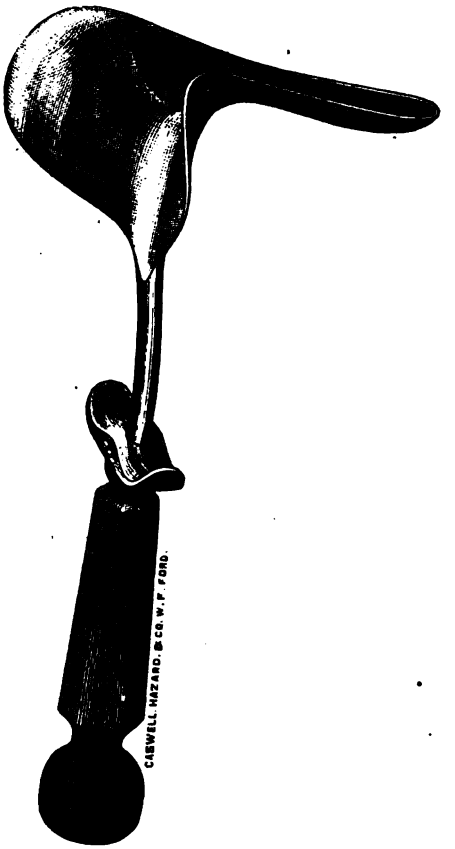
New Instruments.

A NEW FORM OF VAGINAL SPECULUM.

By HUBBARD W. MITCHELL, M.D.,

NEW YORK.

In all operations upon the cervix uteri, and the vaginal canal, every surgeon has experienced more or less difficulty in bringing the parts into view perfectly, and retaining them in view during an operation, owing to the defective forms of the different speculums now in use. When the operation requires the patient to be placed in Sims' position, namely, upon the left side, with the knees drawn up, and the chest carried forward, and a Sims speculum used, the perineum can be drawn backward well enough, but the upper labium and the upper border of the vaginal opening are apt to fall downward and impede the operator's view, as well as to embarrass his



manipulations. The elasticity of the parts also causes the lower border of the vaginal opening to partially close upward, and thus to still further obstruct his view. Besides this, the parts are liable to be touched with the instruments, unless great care is exercised to avoid it. Another difficulty is the holding of the speculum by the assistant.

In holding Sims' speculum in proper position so that the cervix or a fistula can be conveniently operated upon, the assistant must hook the free blade around the back part of his wrist, and retain it in this awkward and painful position during the whole time of the operation, which may be a half-hour, or even much longer. Every assistant who has held a speculum in this way knows how difficult it is, and how often he has embarrassed the operator by letting the speculum slip, because his fatigued and half-paralyzed wrist has been unable to hold it firmly while the operation lasted. These difficulties are plain to every surgeon, and the writer, who has had considerable experience in these operations, set about devising some way to overcome them.

The accompanying engraving shows a speculum which I think meets all the requirements of the situation. It is a modification of the principle of Sims' speculum. It has one blade, as the cut shows, which is *short* and *wide*, with two broad and spreading wings or flanges of such a shape, and bent at such a curve, as to keep the vagina opening completely expanded when the instrument is in position. The upper wing is much larger and broader than the lower, to prevent the gravitation of the parts downward. The lower wing is broad and flat, and so curved on its edge as to be entirely out of the way of the operator. A large nicely shaped handle, easy to grasp, replaces the other blade of Sims' speculum. This handle (the cut shows the shape perfectly) is fitted with a transverse metallic bar, curved in such a way as to allow the first two fingers of the assistant to be hooked over it. By the aid of this device the instrument can be held firmly in position during the most tedious operations without fatigue to the assistant, and to the great comfort of the operator. Mr. W. F. Ford has kindly made this instrument for me, and is ready to furnish it in larger sizes if wanted.

This new speculum has worked admirably in my hands, and I offer it to the profession, hoping they will find it equally convenient.

747 MADISON AVENUE, November 26, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 28 to December 4, 1886.

IRWIN, B. J. D., Lieutenant-Colonel and Assistant Medical Purveyor. Relieved from temporary duty in New York City, and of the charge of the Medical Purveying Depot in that city, and ordered to San Francisco, Cal., to take charge of the Medical Purveying Depôt in that city. S. O. 270, A. G. O., November 19, 1886.

TOWN, F. L., Major and Surgeon. Ordered from Fort Clark, Tex., to Post of San Antonio, Tex., to relieve Surgeon J. P. Wright. S. O. 159, Department of Texas, November 15, 1886.

GIBSON, JOSEPH R., Major and Surgeon. Ordered for duty as Post Surgeon, Fort Lyon, Col. S. O. 134, Department of the Missouri, November 20, 1886.

MOSELEY, EDW. B., Captain and Assistant Surgeon. Directed to take charge of the Medical Purveying Depot, San Francisco, Cal., until the arrival of a proper bonded officer. S. O. 99, Division of the Pacific, November 19, 1886.

POWELL, J. L., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Supply, Ind. Ter. S. O. 134, Department of the Missouri, November 20, 1886.

EGAN, PETER R., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Clark, Tex. S. O. 162, Department of Texas, November 22, 1886.

WALKER, FREEMAN V., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort McIntosh, Tex. S. O. 159, Department of Texas, November 15, 1886.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Recently appointed. Ordered to report to Commanding General, Department of Texas, for assignment to duty. S. O. 271, A. G. O., November 20, 1886.

JOHNSON, HENRY, Captain and Medical Storekeeper. Will, in addition to his present duties, assume charge of the Medical Purveying Depot in New York City, as Acting Assistant Medical Purveyor. S. O. 270, A. G. O., November 19, 1886.

CALDWELL, DANIEL G., Major and Surgeon. Granted twenty days' extension of his leave of absence. S. O. 278, A. G. O., December 1, 1886.

BROWN, P. R., Captain and Assistant Surgeon. Leave of absence for seven days, granted by Post Orders, is extended twenty-three days. S. O. 124, Department of Arizona, November 24, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Relieved from duty as Attending Surgeon in San Francisco, Cal. S. O. 99, Division of the Pacific, November 19, 1886.

TESSON, LOUIS S., Captain and Assistant Surgeon. Granted leave of absence for four months, to date from November 13, 1886. S. O. 278, A. G. O., December 1, 1886.

WAKEMAN, WILLIAM J., First Lieutenant and Assistant Surgeon. Leave of absence extended three months. S. O. 274, A. G. O., November 26, 1886.

MCCAW, W. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared. S. O. 274, A. G. O., November 26, 1886.

CLENDENNIN, PAUL, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Davis, Tex. S. O. 166, Department of Texas, November 29, 1886.

ANDERSON, C. L. G., First Lieutenant and Assistant Surgeon. Recently appointed. Ordered for assignment in Department of Arizona. S. O. 277, A. G. O., November 30, 1886.

BALL, ROBERT R., First Lieutenant and Assistant Surgeon. Recently appointed. Ordered for duty in Department of the Missouri. S. O. 278, A. G. O., December 1, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 4, 1886.

LAW, HOMER L., Surgeon. Ordered before the Retiring Board, December 2, 1886.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Ordered before the Retiring Board, December 6, 1886.

FARWELL, W. G., Surgeon. Detached from the Kearsarge, proceed home and wait orders.

GATEWOOD, J. D., Passed Assistant Surgeon. Detached from the Kearsarge, proceed home and wait orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 4, 1886:

	Cases.	Deaths.
Typhus fever	1	1
Typhoid fever	31	12
Scarlet fever	25	4
Cerebro-spinal meningitis	2	2
Measles	429	44
Diphtheria	110	51
Small-pox	0	0
Yellow fever	0	0

A WOODEN-LEGGED COW.—Some eighteen months ago Mr. John Sharry, V.S., of Norton Malton, England, successfully amputated one of the hind legs for injury of a valuable and well-bred shorthorn cow, the object being to retain the cow for breeding purposes, while a wooden leg was affixed to the stump. Many will be pleased to hear that the object has been fully achieved; the cow is now a mother, and has a fine bull-calf running by her side.

HOW THE LATE PAUL BERT TESTED THE VALUE OF VACCINATION.—It is told of the late M. Paul Bert, as an instance of his scientific enthusiasm and fearlessness, that, at one time, when he was impressed with the prevalence of small-pox from which those vaccinated in youth, and not revaccinated, had suffered largely, he decided to test for himself the value of revaccination; and he did so in a manner which might possibly have cost him his life had his doubts been justified. He was vaccinated, and afterward had himself inoculated at Havre with virus from a man who was dying of small-pox. He escaped the disease.

THE DURATION OF INFECTIOUSNESS in the acute infectious fever is placed by Dr. Frederick Pearse (*British Medical Journal*) as follows: Measles, from the second day, for exactly three weeks; small-pox, from the first day, under one month, probably three weeks; scarlet fever, at about the fourth day, for six or seven weeks; mumps, under three weeks; diphtheria, under three weeks.

QUEEN VICTORIA was the first member of the present royal family of England to receive the benefit of Jenner's discovery. She was vaccinated at the tender age of three months, and no doubt she made matters lively for a few nights.

TYPHOID FEVER IN LOUISVILLE.—The city of Louisville had 1,200 cases of typhoid fever during the past year. Most of the cases were in families using open wells.

A POWERFUL DRUG.—A solution of strophanthin, one part to 10,000,000 of water, brought in contact with a frog's heart, will stop it in twenty minutes.

VOLUNTARY INHIBITION OF THE HEART'S ACTION.—Dr. Lydston, of Chicago, writes to the *American Practitioner and News* that he has the power of voluntarily inhibiting his heart's action, and he has demonstrated it to professional friends.

CORROSIVE SUBLIMATE POISONING.—The obstetrical department is divided into three clinics, with three thousand confinements in each clinic yearly. Four cases of sublimate poisonings occurred last winter. The autopsies showed ulceration throughout the alimentary track, with charred, black appearance of the mucous membrane throughout the colon and rectum. The solution used in these cases was 1 to 4,000 bichloride of mercury.—*Medical Age.*

WHEN IS A MAN DRUNK?—Dr. T. E. Wright sheds the electric light of science upon the question, "When is a man drunk?" From the days of the Apostles it has been observed that man is drunk oftenest after dark; but on Sundays and holidays it is somewhat earlier. Such would be our modest contribution to Dr. Wright's problem.

PARAPHIMOSIS FROM THE TRAPEZE ACT.—M. Francon related, before the Society of the Medical Sciences of Lyons, a case of paraphimosis which was interesting because of its peculiar mode of production. A young man, seventeen years of age, was exercising on the trapeze, and suddenly felt a severe pain in the penis, and in looking for the cause found that the prepuce was pushed behind the glans and could not be replaced. He was hanging from the bar by his hands, and, the conversation of his companions being somewhat loud, he had an erection, the organ resting against the abdomen. He then attempted to swing himself over the bar, and in this way the accident was produced. It was necessary to etherize the patient before reduction could be effected.

DISLOCATION OF THE JAW FROM VOMITING.—Dr. Curtis reports, in the *Medical Press*, the case of a young woman whom he was called to treat for double dislocation of the jaw produced by the act of vomiting.

The Medical Record

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Original Articles.

FEEDING AFTER SURGICAL OPERATIONS.[1]

BY JAMES B. HUNTER, M.D.,

SURGEON TO THE WOMAN'S HOSPITAL, ETC.

THE experience which I have endeavored to reduce to practical form, on the subject of nourishing patients after surgical operations, has been derived chiefly, of late years, from what I have done and seen done in abdominal surgery and in the various gynecological operations. I believe, however, that the subject is one of interest, not only to the general surgeon, but also to the general practitioner. The surgeon should not consider his responsibilities at an end with the performance of a given operation, but should extend his care and supervision to all the details of the after-treatment, the first and chief of which is the proper nourishment of the patient until convalescence is established.

After all capital operations, especially those involving wounds of the peritoneum, the question of nourishment is one of vital importance; and by nourishment may here be understood the use of both stimulants and food. The administration of stimulants in case of shock or collapse, hypodermically or otherwise, need not be considered in this connection.

Let us suppose, for example, that the operation of ovariotomy has been performed, and that the patient has rallied from the anæsthetic. The question arises, When shall food and stimulants be given, of what shall they consist, and how and when shall they be administered, in what quantity, and with what frequency?

My own opinion is that nothing whatever should be given for the first twenty-four hours, except, perhaps, a very little water, unless the patient is very weak, in which case a little brandy may be added. If there is a tendency to vomiting it is better to give the stomach and the alimentary canal *absolute rest*, and even a teaspoonful of water or a morsel of ice, especially the latter, will sometimes be sufficient to excite peristalsis and disturb that rest. If the retching is persistent, and something must be given to combat it, very hot water in small quantities often answers well. After twenty-four hours, if vomiting continues a little black coffee, strong tea, iced champagne, or koumyss may be cautiously tried. If they are rejected it is best to wait two or even three days. Occasionly a patient's fancy may be indulged as to what will, as the phrase is, "settle the stomach." I have known lager beer to be retained when everything else had been tried in vain. When the stomach will retain food, it is well to begin with koumyss, in half-ounce doses, repeated every two hours. If the patient is thirsty, an equal quantity of water may be given in the intervals. In place of koumyss there may be given peptonized milk, milk and lime-water in equal parts, or milk and Vichy, or clear beef-tea, or water in which the white of an egg has been mixed, or barley-water. Whatever is given should not exceed in bulk half a fluidounce. When the stomach is very irritable only one or two fluidrachms should be given at first. Where none of these things agree, brandy, or whiskey, or champagne sometimes answers well. As the stomach bears it, whatever is found to agree best in the way of food is administered at longer intervals and in larger quantity. It is impossible to lay down one rule for all patients. Those who are stout and robust bear abstinence from food much better than those who are weak or anæmic, but even the latter suffer much less than is often supposed from two or three days of fasting.

It will be found, as a rule, that after prolonged anæsthesia the stomach is proportionately longer in recovering its tone. The object aimed at during the first ten days is to sustain the patient's strength with food which will leave the smallest residue in the alimentary canal, which will not cause flatulence, and which will be as far as possible agreeable to the patient. Koumyss or peptonized milk will answer these indications in a larger number of cases than any other form of food. The German operators, Hegar among others, depend chiefly upon small quantities of water and sour wine for the first three days. Where patients have a marked aversion to milk or any of its preparations, clear, freshly made beef-tea may be substituted for it. The administration of stimulants is generally necessary only until food can be digested, and when that point is reached they may safely be discontinued, unless the patient is very feeble.

In private practice, or where the patient is not entirely under the control of trained and obedient nurses, it is very difficult indeed to secure absolute rest for the alimentary canal. As a rule, overfeeding and overstimulation are much more to be dreaded than the reverse.

The method of nourishment described is subject to variation according to the amount of pain, the quantity of morphia administered, and any rise in temperature. After four or five days have passed without any bad symptoms, and the bowels have moved, food may be increased in quantity, great care being exercised until the end of the second week. During the second week stale bread may be given with the milk or other nourishment, but no other solid food. Vegetables and fruit are to be especially avoided, and even soup or broth having vegetables cooked in it.

Rectal alimentation should be resorted to early if the patient is very weak or the stomach very intractable. Stimulants may be given in this way early, using strong beef-tea as a vehicle. Half an ounce of brandy, two ounces of beef-tea, and ten grains of quinine, given every three or four hours, often proves of great value in extreme debility. Where the stomach continues to reject food, systematic rectal alimentation should be resorted to after the second day. I have not much faith in milk in this form of nourishment, but prefer some preparation of beef. Strong beef-tea, peptonized, beef peptonoids, and the preparations of blood, all have their value. In critical cases, where nourishment by the rectum is the chief dependence, I have found nothing so satisfactory as a mixture of the pulp made by scraping raw beef with half of its bulk of pancreatic emulsion (Savory & Moore's). This mixture is allowed to stand in water considerably below the boiling-point until it liquifies, and assumes a homogeneous chocolate-like appearance. It should be prepared freshly each time, and two fluidounces of it administered not oftener than every four or five hours. It should be carried carefully, by means of a small flexible tube, well above the internal sphincter, and injected very slowly, with a hard-rubber syringe, gentle pressure being maintained for some time after the syringe is withdrawn to prevent its rejection. If quinine or opium is indicated, it may be given in the emulsified beef, but it is better not to add to it alcohol in any form.

[1] Read before the Practitioners' Society December 3, 1886.

This method of nourishment, carefully carried out, may be made to sustain and increase the patient's strength, if necessary, for two weeks or longer, the stomach having, in the meantime, absolute rest. The thirst which is often complained of when the stomach is empty may be allayed by throwing into the rectum four or five ounces of tepid water as often as may be required.

The points which I have endeavored to emphasize are these:

I. That personal attention should be given, with precise directions, to the nourishment of patients after all surgical operations, and that too much should not be intrusted to nurses who can have no means of knowing the varying requirements of individual cases.

II. That vomiting is to be avoided by every means in our power, even if it require absolute rest for the stomach for several days.

III. That even appropriate food, where it can be borne, should be given only in very small quantities, and at regular intervals.

IV. That systematic nourishment by the rectum should be resorted to promptly if other means fail or are insufficient.

V. That less food and more water should be given if the patient suffers from fever.

VI. That the dangers caused by vomiting, by flatulence, or by food difficult of digestion, are much more to be dreaded than those due to abstinence from food.

VII. That stimulants are of great value where needed to meet special indications, but may be generally discontinued as soon as food can be digested.

ON THE INFREQUENCY OF SECONDARY SYPHILITIC CONTAGION.[1]

By GEORGE ARTHUR, M.D.,

PASSED ASSISTANT SURGEON, UNITED STATES NAVY.

THAT the belief in the danger of syphilitic contagion from the consecutive lesions of that disease, by the mere contact of a healthy or, at most, slightly abraded mucous surface with such lesions, or with the secretions therefrom, is quite generally accepted, will not, I think, be disputed. Dr. Keyes, of New York, expresses this belief, as positively, perhaps, as any of the prominent writers on venereal diseases, in the following passage, taken from his work on that subject:

"The contagious properties of secretions from mucous patches, and secondary ulcerated surfaces upon mucous membranes, have become of late years so obvious, clinically, that it is questionable whether this lesion does not divide the honors of propagating syphilis equally with chancre, or possibly even surpass its rival. Fournier has called attention to this fact, and Baumler has emphasized it. Mucous patches and mucous tubercles, ulcers of the mucous surfaces—all of these lesions secrete freely, and are in a position frequently to be brought in contact with surfaces capable of absorption. The long duration of these lesions makes them especially dangerous; they last for months at a time, and relapse frequently, while the syphilitic chancre, for the most part, occurs upon a patient but once in a lifetime, and is of comparatively short duration.

"Abrasions may be inoculated during sexual contact as well from a mucous patch as from a chancre."[2]

Fournier speaks of mediate contagion as a fact too well established to make more than an allusion to it necessary, and relates several cases in his own and others' experience.[3] These and other classic cases can be found repeated again and again by subsequent authors in treating of the same subject.

The same views are held by most of the well-known syphilographers, and, I believe, by the great majority of practitioners—not, I venture to maintain, from their own experience, but from their reading and teaching, and from the influence that any generally accepted belief has upon those who have not had the opportunity to make their own investigations. I have, in addition to the inquiries, the replies to which are contained in this paper, asked a considerable number of civil practitioners, who had previously declared their faith in the ready contagiability of the secondary lesions, for the results of their own experience, and have reason to believe, from their uniformly negative answers, that it does not differ from that of military surgeons, which it is the object of this paper to present.

I do not think it is claiming too much to say that the information obtained on this matter from the medical officers of the army and navy is unusually valuable and trustworthy, particularly since it bears upon the causation of the diseases observed. A full statement of the origin of the cases that come into their hands is one of the most important parts of the records kept by them; and since these records may at any time be subjected to the scrutiny of boards of survey, retiring boards, or, finally, of the pension office, and the element of causation of the disease of the patient or claimant is the most important factor in controlling their ultimate decision, the surgeon, in anticipation of such examination of his records, is very careful to sift all the evidence that is obtainable as soon as the cases come to his attention. This important duty, on the proper performance of which so much may depend, it is enjoined upon all medical officers to carry out faithfully by the regulations and instructions of both services; upon their record-evidence is based the only legal decision in cases of retirement, or pension, or the refusal of pension. The necessity that medical officers are under of giving satisfactory reasons for whatever conclusions they may arrive at—it is not sufficient to simply state their opinions in regard to the origin of a case—is another incentive to careful investigation before recording their decisions.

As syphilis is a disease that may in any instance result in the permanent disability of the individual affected, any unusual feature in its origin or the seat of the lesion first observed is sure to lead to a searching examination of all the evidence bearing on its acquisition.

In performing this duty the military surgeon possesses the advantage of having his patients under more perfect observation and control than is usually enjoyed by civilian practitioners, and can, moreover, obtain more trustworthy evidence as to their habits, history, the probable source of the disease, and the nature of the alleged infecting lesion, particularly when it exists in a member of a crew or garrison.

All these and other sources of information within the reach of military surgeons are, for the most part, practically closed to civilian practitioners, who are usually obliged to accept the patient's story, or form their own theories as to the probable origin of the cases coming under their notice, without evidence.

Both soldiers and sailors are pretty well aware of the general skepticism of their surgeons about extraordinary methods of syphilitic infection, and, appreciating the intimate knowledge that these officers have of their habits, rarely attempt to assign any cause but the true one for their misfortunes. In civil life, however, there exist, in all classes of patients, the strongest motives for concealing a disgraceful truth, even from the physician who is treating them, and the laity are well enough informed, as a rule, to know that the story of a perfectly innocent and accidental contact with a syphilitic individual, or matter from a mucous patch on the rim of a glass, spoon, urinal, or other utensil, has at least a chance of being believed if firmly persisted in. Enlisted men are not entirely exempt from this kind of bashfulness, it is true, but as concealment of any disease in a crowded ship or bar-

[1] Read before the Naval Medical Society.

[2] A. L. Keyes, A.M., M.D.: The Venereal Diseases, including Strictures of the Male Urethra, p. 64. Wm. Wood & Co., New York, 1880.

[3] Alfred Fournier: Leçons Cliniques sur le Syphilis, p. 39 et seq. Paris, Delahaye et Lecrosnier, 1881.

rack is impossible, they soon acquire a cynical indifference to the moral, or immoral, aspect of their irregularities that rarely obtains in civil life.

I do not affirm, by any means, that the conclusions of military surgeons in this matter are not open to the many causes of error that envelop the origin of these atypical cases of infection, but I believe that of all classes of practitioners they are, by habit and training, better *detectives* and the least liable to be led into error, either by carelessness in forming their conclusions, by the wilful or innocent misstatements of the patients, lack of experience, or failure to keep the cases under observation long enough to determine their true nature. Among the letters that I have received from the medical officers of both services during this investigation, several speak of cases in which the proof of secondary contagion seemed satisfactory, but that after some time had elapsed facts came to their knowledge that proved the fallacy of their original decisions as to their origin. I mention this merely to show how easy it is for even the most conscientious observers to be led astray, unless they have unusually good opportunities for verifying their conclusions by continued observation of each case.

If syphilization from the consecutive lesion were common in any walk of life, we would naturally expect it to be exceptionally frequent in the army and navy. In these services large numbers of unmarried, or practically unmarried, men are massed together for long periods, and from necessity must come into frequent and close contact with each other, and, in spite of all possible care, must use many things in common, without proper cleansing, that could easily be the vehicles of the syphilitic virus, if it were so active and readily absorbed as the majority of our writers would lead us to believe. Anyone who has seen an entire ship's crew, syphilitics and all, on a hot day in the tropics, crowding around the scuttle-butt, drinking freely and frequently out of the same tin-cup, and failing to find the theoretically-to-be-expected crop of labial chancres following in due time, would, I think, have his faith in the assertions of many standard syphilographers shaken.

The men thus exposed are not exempt from oral abrasions. The food of enlisted men is often hard and coarse, and defective and broken teeth, in the absence of competent dentists, is quite the rule with them. Sailors, moreover, are in the habit, while working aloft, of using their mouths as a third hand, and cannot be fastidious as to what they put into them.

Some idea of the prevalence of syphilis in our army and navy can be obtained from the following figures, taken from the reports of the surgeon-generals of both services; but the reader should bear in mind that only those cases appear on the official reports, from which the figures are taken, that are so disabled by the disease as to be incapable of performing duty. Anyone who is familiar with syphilis, clinically, will be able to estimate what proportion of cases, under constant supervision and treatment, ever arrive at that condition. From my own experience I should judge the proportion to be, at the very outside, not more than one-third.

The army reports, as far as published, show for the last ten years an average of 46.07 cases of syphilis, including both the primary and consecutive forms, per 1,000 of strength.

In the navy the average during the last twelve years per 1,000 of strength is, of primary syphilis, 23, of consecutive, 18 cases—total, 41.

This represents, in my estimate of the proportion of cases appearing on the official returns to the actual number existing during a year, for both services, including both primary and constitutional consecutive syphilis, 130.59 cases per 1,000 of strength, or 1 in 7.66 individuals.

Not being willing to trust my own experience alone in forming a conclusion so opposed to the general opinion, some information as to the experience of other observers under the same or nearly the same conditions was desirable, and accordingly the following letter was sent to all the medical officers of both services that were accessible, so worded as to give no indication of my own views in the matter, but to get as complete and unbiassed a statement of their own experience as possible:

MUSEUM OF HYGIENE.

WASHINGTON, D. C., October, 1886.

DEAR SIR: Will you be kind enough to tell me how many cases of syphilitic infection from other than the primary lesion have fallen under your observation, and by what variety of lesion the disease was communicated? It would materially add to the value of the information if you would furnish me with all the important evidence that you can remember bearing on the origin of the cases, and specify whether the disease was probably acquired in or outside of the post or ship on which it was observed.

I particularly desire information upon those cases that have occurred in your own practice within the service, and upon those only. My object in making this inquiry is to learn, as far as can be done by this method, the status of the consecutive lesions as vehicles of the contagion among soldiers and sailors, and I will be greatly indebted to you if you will fill the accompanying form and return it to me at your earliest convenience.

1st. Number of cases observed. (If none, please answer accordingly.)
2d. Nature of the infecting lesions.
3d. Nature of the communicated lesions.
4th. Where acquired.
5th. Whether or not consecutive symptoms were observed.
6th. Over how many years do your observations extend?

Very respectfully, etc.

Of the replies received to this letter, the following is a summary and analysis:

Total number of years over which the observations extend, 3,327; average for each surgeon, 18.59.

To the first question, 138 surgeons answer "None," without qualification; 29 answer that they cannot give any satisfactory information on the point in question, or cannot recall a case; and 12 report cases. Average number of men under observation for the last ten years, 33,760. The number of cases reported is 41.

To the second question the answers are: Oral mucous patches, 38. Of these the supposed infecting lesion was seen in 30 cases, and suspected in 8; unknown in 2; not stated in 1.

To the third question: Chancre in 37 cases; large indurated ulcer in 1; "consecutive symptoms" in 1; not stated in 2.

Method of introduction of the virus: By kissing in 4 cases. In 3 of these the disease was acquired from prostitutes, and the alleged "kissing" occurred in houses of ill-fame. In the fourth the circumstances under which the kissing took place are not stated. In none of the above were the infecting lesions seen by the surgeons reporting the cases.

By direct inoculation in 29 cases. Of these, 26 were communicated by tattooing. These cases are reported by Captain and Assistant Surgeon T. E. Wilcox, who observed the infecting lesions—mucous patches in the mouth of the man who did the tattooing, who moistened the needles by placing them in his mouth repeatedly during the operation. Dr. Wilcox thinks that these cases have not been reported before. In 1, by vaccination. This case occurred in Libby Prison during the war. The infecting sore was not seen; secondary symptoms were observed. By biting in 2. In 1 of these cases it is stated that a wound was made in the lip of the patient, where the chancre afterward appeared. In the other it is merely described as a bite on the chin.

During a vaginal examination in 1 case the resulting chancre was situated on the finger of the surgeon making the examination. The nature of the infecting lesion was not ascertained. One case was communicated by a married man, who had a mucous patch on his tongue, to his wife, on whose lip a chancre appeared. The circumstances of the infection are not definitely known. One case was seen in a female camp-follower, the lesion appearing on her lip, the infecting lesion supposed to be mucous patches in the mouth of a soldier. In 1 case none of the circumstances of the origin of the case are

stated. It was acquired in Tien Tsin, China, where the men have unusually free access to prostitutes.

From mediate contact with syphilitics 4 cases are reported. One was acquired in camp from a mouth-piece of a cornet, the infecting lesions, which were seen by Surgeon Charles R. Greenleaf, of the army, who reports the case, were the ordinary mucous patches in the mouth of the infector. The man who was infected developed a chancre on the lip, followed by secondary symptoms. One occurred in a hospital and 1 on board ship, from using a pipe "supposed" to have been used by a syphilitic in one of the cases; in the other the evidence that the owner of the pipe was suffering from oral patches is satisfactory. Labial chancres, followed by consecutive symptoms, appeared in both these cases. One occurred in a naval hospital under the following circumstances: A man in the same ward with several syphilitic patients, some of whom had consecutive lesions of the mouth, developed a chancre of the lip. Passed Assistant Surgeon Fitts, of the navy, who reports this case, found, on investigation, that all the men were in the habit of drinking from the same water-faucet by applying their lips to the orifice, and thinks that the contagion was transferred in this way. Secondary symptoms were not seen, as the case passed from under observation before they were due, but the labial chancre was characteristic.

Of these 41 cases, 29, including the 2 cases of biting, were acquired by direct inoculation into the blood, and can be dismissed at once as not being cases of secondary *contagion*, which are the only ones with which this investigation is concerned, the possibility of the *inoculation* of the consecutive syphilitic virus being too well established by observation and experiment to be questioned.

In each of the 3 cases acquired by kissing prostitutes, and in the fourth, in which the character of the woman communicating the disease is not mentioned, there are at least four probable sources of error. Either the lips of the patient may have come into contact mediately, *e.g.*, by means of the finger, or immediately, with the secretion of a primary lesion on the genitals, an open wound may have existed in his mouth, or the supposed consecutive lesion in the mouth of the woman, which was not seen by the surgeons reporting the cases in any instance, may have been a chancre.

In the case in which the disease was acquired during a vaginal examination the nature of the infecting lesion was not ascertained, and there is consequently no evidence that it was not a chancre.

In the case communicated by a married man to his wife the data are too meagre to justify any conclusion.

In the case of the female camp-follower there are so many possibilities other than secondary contagion that it cannot be considered as proving anything. This is true also of the labial chancre acquired in Tien Tsin, China.

The 4 cases of mediate infection are all that now remain to be considered. In these the conditions for observation were as good as can ever be expected to obtain in such cases, and are the only ones in which the evidence of secondary contagion approaches reasonable certainty. Even in these absolute certainty is out of the question, for in any one of them an open wound may have existed, providing a path for direct inoculation, or the contagion may have come from a primary lesion, since they all occurred in men who lived in close contact with others, among whom syphilis exists perennially in all its forms, and contact with matter from such lesions was by no means impossible.

When we consider the lubricity and mendacity of men, even of those whose education and refinement would, *a priori*, be considered effectual bars to such indulgences, or even inclinations, as some recent developments in England indicate the existence of in the highest social classes, and the strong disinclination that even the most shameless have to confessing to unnatural debauchery, it does not seem unreasonable to view the cases in which women were involved, and which were attributed to kissing, with great suspicion, and to decline forming any general theory on such foundations.

I do not undertake to deny that secondary syphilitic contagion is possible, but the results of the large experience which is presented in this paper seem to me to indicate that such contagion is extremely rare, that the danger of it has been enormously overrated, and that the conditions under which it occurs, if it does occur, need much more careful observation and study before we can arrive at any final conclusion with regard to them.

In view of the outcome of this investigation, as far as it has gone, I am very strongly inclined to believe that even in the few cases of mediate infection reported the lues venerea or specific bacillus, if the contagion is a bacillus, granting that it came from a consecutive lesion, must have been introduced *directly* into the blood-vessels, and presented *directly* to the white corpuscles, as in the cases of inoculation by tattooing, and that it will not be taken up by the lymphatics; in other words, that consecutive syphilis is, like rabies, inoculable, and not contagious.

In the 3,327 years of observation, under the most favorable circumstances for the propagation of the disease by secondary contagion, the supposed conditions for such contagion must have occurred innumerable thousands of times without a missing factor, yet the result shows only 4 cases in which the primary lesion, or matter from it, can, with anything like reasonable certainty, be excluded. Even in these 4 it is by no means beyond the bounds of probability that matter from a primary sore might have caused the mischief, or that they were cases of inoculation.

If we admit all the supposed cases that are, by the most liberal interpretation, due to secondary contagion, in the list presented, 3 of which were not observed among soldiers or sailors, and have only been included because of the unexpected meagreness of the results of the inquiry, we have in all only 11 cases as the result of these many years of careful observation.

I have little doubt that a fuller number of answers to the letter of inquiry given above would have given a result even more striking than can be shown from those received, since it is reasonable to suppose that the observers who had cases to report would feel more interest in the investigation than those who had none. Several of the gentlemen who did reply expressed great regret that they had no such cases as I was looking for to report, and I suppose that others not having cases did not think it worth while to reply, in spite of the precaution taken in the wording of the circular to secure negative as well as positive experience.

Rather unexpectedly several excellent observers, whose experience has extended over twenty years and upward, expressed quite a pronounced skepticism as to the possibility of the secondary contagion of syphilis. On beginning the investigation I did not suppose there were so many heretics extant.

It is true that all the evidence presented in this paper is of a negative character, and that the results, if one can speak of results that are so purely negative, are arrived at by a process of exclusion. If the reader thinks the exclusion to be too indiscriminate, the data are presented in full, and he can draw his own conclusions. It should be remembered, however, that all the evidence on the other side of the question is quite as negative, depending entirely upon the exclusion of the primary lesion in all the cases reported so far.

It would be interesting to know more certainly than we now do on exactly what or how much ground the prevalent belief in frequent secondary contagion is based. As far as I can find out from the literature of the subject, its only foundation is a very limited number of cases (many of them old, and which, under the searching analysis of the present day, would not be accepted at all), and all of them open to serious sources of error, and besides

these, only the unsupported assertions of various syphilographers and strenuous advocates of the "Contagious Diseases Act." If this paper succeeds in exciting a new interest in the matter, and draws forth from some of those who believe in the prevalence of syphilis acquired from the consecutive lesions by contact alone, even a few cases from their own experience, about which there can be no reasonable doubt, it will have served a purpose at least; but unless we can get more reliable data than we at present possess, upon which to base the theory, I do not think it is entitled to acceptance.

Before concluding I wish to thank the medical officers of the army and navy for the prompt and courteous attention my request received from so many of them.

Since the summary was made, five more replies have been received, all negative, which cover a period of 75 years, bringing the total number of years of observation up to 3,402.

ON THE REMOVAL OF DEEPLY SITUATED TUMORS IN THE REGION OF THE BACK.

By H. W. BOONE, M.D.,

SURGEON TO ST. LUKE'S HOSPITAL AND PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT OF ST. JOHN'S COLLEGE, SHANGHAI, CHINA.

THE medical missionary in China who has charge of a hospital soon discovers that his own reputation and the fame and success of the institution under his care will depend in a very great measure upon his success as a surgical operator.

No one class of cases has given me more cause for serious consideration, none has been followed by better results, than the operations undertaken for the removal of deep-seated tumors in the neck. The very first thing which became clear to me was, that the mere external appearance of a growth gave no indication whether it would be easy to remove or no. The largest tumor of the neck I have ever seen—larger than the patient's head—was removed without the slightest difficulty, by simply peeling it out of its bed, as one would peel an orange from its skin; not a single vessel was tied, or twisted, and the loss of blood was insignificant. An apparently small tumor, showing but little on the surface, may send prolongations among the deeper structures of the neck which may tax the skill and patience of the operator to the utmost before its removal is successfully accomplished. Sometimes, after careful and repeated examination, from within the mouth, by placing the head in various positions, causing the patient to swallow, pressure on the carotid, and the use of every means to come to a correct opinion, one finds that little of a definite nature has been learned. The important questions as to the limits of the growth, its point of origin, and whether or no it is deeply connected with important structures in the neck, may, one and all, be involved in as much mystery as before the examination was held. Even in these cases one is quite justified in making free exploratory incisions and attempting to remove the new-growth. The patient should always understand that, if at any period of the operation it is found impossible to excise the tumor, the operation can be abandoned, the wound closed, and allowed to heal up without any fear of after trouble. The most thorough cleanliness of the hospital ward, and of everything constituting the patient's environment, with the careful and persistent use of aseptic surgery, can alone justify the above method of treatment. My operating-room is a detached building having no connection with any part of the hospital.

The following cases have occurred in my practice:

CASE I.—July 2, 1883, A. W. M——, aged thirty-six, laborer. Swelling appeared four years ago, under the right side of lower jaw, grew slowly till three months ago, when he received a blow upon it. It then grew faster. Complains of pain and difficulty in swallowing, for which he seeks relief. The tumor extends from midway between symphysis of the lower jaws to one-half inch behind the ramus, downward for two and one-fourth inches, very slightly movable at its upper boundary, and sends a prolongation down under edge of sterno-mastoid. Lower part of tumor is more freely movable than upper, is not adherent to the skin, can be felt from within the mouth, and has a firm, springy feel.

July 5th.—After every antiseptic precaution, chloroform was given by Dr. S. K. Fory, the spray turned on, and, assisted by Dr. R. A. Jamieson, I made a free incision from the angle of the jaw to a little below the lower margin of the growth. A ⊢-incision, parallel to and below the jaw, extended beyond the anterior margin of the tumor. The surface was cleared as far as possible; the facial artery and vein were freed and held aside; the tumor was put on the stretch with a blunt-pointed director or with my finger-nails the posterior margin was followed for a short distance beneath the edge of the sterno-mastoid; some points could not be torn across, and they had to be freed with a pair of blunt-pointed scissors, curved on the flat, turned toward the tumor. The tumor was followed up, and found to dip down toward the carotid sheath. It was then attacked from the front and gradually freed, a few vessels were picked up, tied in two places, and cut between, and the tumor was lifted out from its bed. A pretty free oozing of blood was controlled by pressure. Two drainage-tubes were inserted, the edges of the wound secured by interrupted sutures of carbolized silk, small pads of Lister gauze put on each side of the wound to bring its sides into apposition, larger compresses filled up the space under the jaw, and over all a Lister dressing and gauze bandages. Morphia, one-third grain. Patient very restless, tried to remove the bandages; had to keep him under full doses of morphia. The third night his temperature was 101°; dressing changed under spray. There had been a slight oozing of blood.

Seventh day.—Temperature $98\frac{1}{10}°$, one drainage-tube removed, other shortened and replaced; serum.

Twelfth day.—Removed stitches and drainage-tube.

Eighteenth day.—Patient removed dressing in night, as neck itched. Cleaned and dressed with carbolized oil and lint. Is a restless man, moving his head incessantly.

Thirtieth day.—After some sero-purulent discharge the wound has entirely healed, and patient was discharged, cured. The tumor appeared to be an enchondroma of the submaxillary glands, it was encapsuled, and the only trouble in removing it was the care required to avoid injury to vessels and nerves in its neighborhood.

CASE II.—February 25, 1884, H. S——, female, aged forty-seven, married. Firm, hard, elastic tumor below lobe of right ear, extends downward for nearly three inches. Very vague history. No pain, skin free, tumor very slightly movable.

February 28th.—Dr. Chin Wo, head assistant, gave chloroform under spray, and, assisted by Dr. Jamieson, I made a vertical incision down posterior line of tumor, extending above and below growth. After freeing superficial attachments found and opened the capsule. With the knife, or a pair of blunt-pointed scissors, freed the tumor by following the line of the capsule. There was no great difficulty in removing the tumor. The case was dressed precisely like the preceding one. During the first week the temperature went up to 100.4°. Drainage-tube was removed on eighth day. A few days after, the patient loosened the dressing to feel if the wound was healed. Dressed with carbolized oil. Lower part of wound healed by granulation, and patient discharged, cured, thirty-four days after the operation. This was a glandular tumor of the parotid region.

CASE III.—June 7, 1884. He has a tumor size of a hen's egg in left submaxillary region, extending to median line. With one finger on skin and one in the mouth fluctuation can be felt. The swelling is smooth

and soft, not adherent to the skin; can be moved slightly, up and down only; no pain.

June 8th. — Dr. Chin Wo gave chloroform under spray, and, assisted by Dr. Jamieson, I made a vertical incision over the centre of the tumor, freed it from its superficial coverings, and then proceeded slowly and carefully to detach it from its bed. A few vessels were tied, then cut across; some adhesions slowly torn or teased through, and the tumor was removed without any great difficulty. Lister dressings were applied. The temperature never rose to 100°. Drainage-tube was removed on the fifth day; serum. The next day the patient insisted on going home, as he felt quite well. The tumor was a sebaceous cyst.

Case IV.—June 10, 1884, married lady, aged twenty-two. Noticed a swelling under right ear two years ago. Last year consulted a Chinese doctor who had graduated in England. He advised leaving it alone. Has tried many native physicians; one of them punctured the tumor with a grooved needle and let out some creamy fluid. The tumor extends from mastoid process to beyond angle of jaw, under the sterno-mastoid, and for three inches downward; is smooth, soft, elastic; cannot be clearly felt from within the mouth. Skin free, except where the puncture was made. The limits of the tumor cannot be defined; it goes very deep and is hardly at all movable. The husband presses for an operation, and announces his intention to seek other advice if I decline to operate. I informed the patient and her husband that I would operate and remove the tumor, if possible; that the operation would be attended with danger, and might fail of accomplishing the object for which it was undertaken.

June 14th.—Patient was admitted to a private room, the bowels were attended to, and she had a bath and new clothing.

June 15th.—Beef-tea and bread at 7.30 A.M.; egg and brandy at 9 A.M.; 10 A.M., neck and face scrubbed with soap and water, then with lint dipped in turpentine; no spray, instruments and hands soaked in turpentine. Chloroform given by Dr. Chin Wo, and, assisted by Dr. R. A. Jamieson, I made a very free incision, extending the whole length of the tumor, near its posterior border, from the lower end of the mastoid process along the border of the sterno-mastoid. After a while it was found necessary to make a ⊢-incision forward over the growth. The tumor was kept on the stretch by Dr. Jamieson; he also retracted vessels and nerves when it was possible to do so. With my fingers, a blunt pointed director, and from time to time a pair of blunt-pointed scissors, curved on the flat and directed toward the tumor, I began to work at the posterior margin of the tumor. I followed it back under the sterno-mastoid until the posterior portion was freed. The lower part of the tumor was now exposed and cautiously freed from its attachments; the sheath of the carotid was very freely exposed. Now the upper anterior part of the tumor was attacked; here there were several arteries and veins which had to be tied in two places and divided. The wall of the tumor was thinner; it finally gave away; there was a gush of a thick, clotted, dark, sebaceous substance, and thus an important guide to the extent of the tumor was lost. Keeping the cyst-wall on the stretch, bit by bit, with the blunt-pointed scissors, it was freed from its attachments. I was working at a great depth, and had to stop continually to sponge out the blood, which oozed freely, obscuring the parts. At length the whole growth was removed. Although no bleeding point could be found, a constant oozing came from the walls of the cavity. Some idea of the extent of the dissection can be formed from the fact that Dr. Jamieson and I both felt three of the transverse processes of the cervical vertebræ, which were laid bare, and that the carotid sheath was freely exposed. The sterno-mastoid was not divided, and part of the work was directed as much by the sense of touch as by sight. The bleeding was checked by filling the cavity with pledgets of lint, squeezed dry after soaking in turpentine. These were removed; a large drainage-tube was inserted; the wound sewed up with the continuous chromic gut suture; graduated compresses of Lawton's absorbent cotton in carbolized gauze applied to both sides of the wound—to bring the sides of the cavity into apposition—larger pads filled up the space under the jaw, and still larger pads surrounded the neck, side of head, shoulder, and upper part of chest. The operation was completed, the dressing applied, and the patient put to bed at 11.55 A.M., one hour and fifty-five minutes from the time when the first incision was made. A kind of cap, with four tapes tied to a bandage round the upper part of the chest, was applied to keep the head still. The temperature never rose to 100°, and the patient went home on the fourteenth day with a slight sinus in the track of drainage-tubes. She returned every five days for observation, and on the twenty-fourth day the parts were entirely healed up.

Case V.—December 23, 1884, P. Y——. He has a glandular tumor in left parotid region, extending forward under ramus of lower jaw, about the size of a hen's egg; firm, hard, very slightly movable; chloroform; turpentine as an antiseptic. Assisted by Dr. Jamieson I made a free vertical incision over the tumor, with a ⊢-cut forward below ramus lower jaw, opened the capsule and dissected out the tumor without much difficulty. Almost impossible to keep this patient's head quiet. Although a cap with tapes prevented bending the neck, he could rotate it constantly. Finally, a thin board splint was fastened to his head and shoulders, and the wound put at rest. Discharged, cured, on the fortieth day. The temperature was good all the time, and there was no purulent discharge.

Case VI.—July 17, 1885, Y. S. T——, aged sixty-one, teacher. Periosteal fibro-sarcoma of lower jaw, left side; growing slowly for four years. Tumor firmly adherent to jaw, goes down very deeply in the neck to one and two-third inch of clavicle. Solution bichloride, 1 in 2,000, as antiseptic. Assisted by Dr. Jamieson, Dr. Simons, U.S.N., and Dr. E. M. Griffith, attending physician to the hospital, I made a free elliptical incision, followed by a very careful dissection, tied both ends, and divided the facial artery and vein. The vessels passing over or into tumor were, most of them, so adherent that they had to be tied and then cut across. The attachments to the jaw were separated. After a long and tedious dissection the tumor was freed from its attachments; it was raised from its bed; a slight tear then occurred in a large vein near its junction with the jugular. The wound was filled with solution of bichloride from a sponge which had been kept ready for such an emergency, and the vein was tied in two places and divided between the ligatures. For the first time I heard the hiss of air entering a vein. A drainage-tube was inserted, the wound closed by a continuous suture, and a bichloride and wood-wool dressing applied. The old man kept perfectly quiet; the temperature never rose above 99°, and the wound was entirely healed on the eleventh day after the operation.

Case VII. — October 21, 1885, Mrs. T——, aged twenty-four. Sebaceous tumor under right side of lower jaw, from angle to near symphysis, extending two inches downward. This case was seen at the Margaret Williamson Memorial Hospital for Women, where I have the honor to be the visiting surgeon. Assisted by Dr. Elizabeth Reifsnyder, the Superintendent; by Miss McKechnie, the Superintendent of Nursing; Dr. Philip Leech, U.S.N.; and Dr. Jamieson, I made a very free incision over the surface of the tumor, found its wall adherent in every direction, and spent nearly an hour in slowly picking out the prolongations which ran between the deep fascia of the parts. The very thin wall of the tumor gave way, and the soft, glairy contents ran out. At last all was clear except a vessel which appeared to be the lingual artery. As our cat-gut was used up, I tied

this with carbolized silk, left the ligature long, and removed the sac of the tumor. The wound was dusted with powdered iodoform, and filled in from the bottom with squares of lint full of powdered iodoform. The ligature was left to hang out. Gamgee pads over all. The temperature never rose to 100°, and the patient was discharged, cured, thirty-four days after the operation.

Case VIII.—November 4, 1885. She applied to have a strumous gland, the size of a pigeon's egg, removed from the right side of the neck. An incision was made over and parallel with the anterior border of the sterno-mastoid. On removing the gland three others were found to be diseased, the incision was enlarged, and these were also removed. Wood-wool and bichloride dressing. The temperature continued nearly normal for a while, then rose to 101°, and on the tenth day pus was discharged. After several examinations a small sinus was found, this was dilated, and with a sharp spoon a gland cavity was scraped out. The patient's neck was immovably fastened, and she was discharged, cured, on the thirty-second day after the operation. This patient was treated at her own home, and was more difficult to manage than those who were in the hospital.

Remarks.—Case IV.: The wife of a mandarin, and sister of a mandarin of enormous wealth and influence; presented a tumor which seemed to be about the size of an orange. The tumor proved to be very much larger than could be determined from the most careful examination. It involved very deep-seated parts, part of the brachial plexus was exposed during the operation, and yet the patient made an excellent recovery. Case VI.: Periosteal fibro-sarcoma was so firmly adherent to the surrounding parts that it required great care not to lacerate the structures with which it was in contact. Case VII. presented unusual difficulties. At one time I feared that it would be impossible to remove the whole growth, but by perseverance it was fully detached. In Case VIII. the wound might never have closed if the sinus at its bottom had not been found, after prolonged examination, and the suppurating gland causing the mischief removed. In Case IV. the operation was made longer and more difficult by my determination not to divide the fibres of the sterno-mastoid. Should I meet with such another case, I would not hesitate to divide the muscle in part, and unite its cut ends afterward.

Premising that, as a general rule, malignant tumors had better be left alone, it is well to study the location of a tumor, and plan beforehand how to make the incisions. The incisions should be large enough to give free access to the tumor on all sides, its surface should be clearly made out; then work at it, using a blunt-pointed director and the finger-nails to tear up the adhesions. Blunt-pointed scissors, curved on the flat and directed toward the tumor, are better than the knife. Secure all vessels before cutting them. Many vessels and nerves may be saved by freeing them a little and letting the assistant retract them. A good assistant is all-important. As I assist my colleague, Dr. Jamieson, in all of his operations, and he returns the compliment by assisting me, we have learned to be of great service to one another. Keep the tumor on the stretch, free the lower part, and ascertain the relations of the great vessels to it; compress the internal jugular where there is any danger of injury of that vessel admitting air to the heart. Should any large vein be accidentally severed, fill the cavity of the wound with fluid to prevent entrance of air. In dressing the wound have free drainage, use continuous cat-gut suture, paint line of suture with iodoform and collodion, leaving aperture of drainage-tube free. Use compress of small Gamgee pads on both sides of the line of suture, fill angle of neck with pads, and put on large pads, covering whole neck, shoulder, and upper part of chest, over all. Keep the head immovable by a splint made fast to back and shoulders and to the head. A wooden splint, well padded, will do, but not so well as one of solid leather moulded to the parts. Give the patient nourishing food, and trust no one but yourself with any detail of the after-treatment.

I am happy to acknowledge the valuable assistance and advice rendered to me on many occasions by medical officers of the United States Navy. Fleet Surgeons Bogert and Kershner, Surgeons Streets, Price, Simons, Ferrabee, Scott, Leech, Sayre, and others, have visited the hospital and cheered me with kind words of sympathy. Surgeons from the French, Russian, German, English, Italian, Japanese, and other men-of-war, have visited the hospital and taken a share in our work.

NOTES OF SOME RECENT CASES OF HIP-JOINT DISEASE, INCLUDING TWO CASES OF EXCISION, AND ONE OF BRISEMENT FORCÉ, WITH REMARKS ON SOME OTHERS.

By W. R. WHITEHEAD, M.D. Paris,

ex-president of the colorado state medical society; late professor of anatomy in the medical departments of both the state university of colorado and of the university of denver, etc.

In the present state of opinion generally, among medical men, concerning the results of the treatment of hip-joint disease, I think that I need make no excuses for reporting the following cases. I am still further strengthened in this course by the encouraging words of an eminent surgeon, and, in my opinion, the highest authority on orthopedic surgery, who, on receiving the photographs from me of one of my two cases of excision herein published, replied to me as follows:

"285 Fifth Avenue, New York,
"October 5, 1886.

"My dear Doctor Whitehead: Many thanks for your beautiful photographs of exsected hip; they are really magnificent and make me feel happy to think that I have done some good in the world by propagating an idea that is yielding such splendid results. Yet in this city there are those who continue to denounce exsection as unjustifiable. In the face of such a case as this of yours, and some fifty more almost like it, that I can show, how can men be so blind as not to admit the utility, in fact, the necessity, of such an operation? Let us live in hope that the scales may some day fall from their eyes. I congratulate you heartily, and wish you a continued success. Yours truly,

"Lewis A. Sayre."

Case of hip-joint disease of over three years' duration; excision of four and one-eighth inches of bone, followed by less than one inch of shortening and perfect motion of the joint.—The following case, Freddie H——, of Denver, aged eleven, was first seen by me on February 11, 1886, in consultation with Dr. A. Diedrichs, of Denver, who, with the consent of the father of the boy, desired me to treat the case. It was one of advanced hip-joint disease of over three years' duration, dating from a kick from a schoolmate, and the boy had been successively under the care of two or three Denver surgeons of some prominence. His condition at the time of my first visit to him is accurately shown at Fig. 1, considerably reduced from a fine photograph by Rinehart, and engraved by the Mills Engraving Co., of Denver.

There was considerable pain in the hip, and limited movement of the joint. No abscess about the hip was detected at this time, though suspected, and some days later a wire cuirass was ordered for him, with a view to fixation of the joint and extension after tenotomy, and breaking up the adhesions about the joint.

On February 27th I was called to see him, and found an abscess at the upper and front part of the thigh; and on the following day I aspirated, and withdrew a small quantity of pus, and decided on excision of the diseased bone. On March 9th I made a second aspiration, and on March 13th, in the presence of, and assisted by, Drs. A. Diedrichs, H. W. McLauthlin, L. T. Durbin, and

Mr. N. D. Estes, medical student, I did subperiosteal excision of the femur, and removed, after successive cuts before I got to healthy bone, four and one-eighth inches of bone, this being the length of the bone in the dried state; besides, I removed considerable diseased bone, with a bone gouge, from the acetabulum. The periosteal cavity was filled with balsam of Peru, and this cavity and the wound stuffed with oakum, and the wound dressed. After suitably preparing him for extension, I placed him, before he came from under the influence of the ether, in the wire cuirass, previously provided.

FIG. 1.—Before Subperiosteal Excision.

The bone was very soft and easily broken, and extensively diseased. Fig. 2, copied from a photograph of it, shows its exact size, as nearly as possible, and gives a fair idea of its appearance. The treatment in the cuirass lasted about nine weeks, having commenced passive motion about the sixth week, and after the wound was well filled with granulations. He was afterward placed in a Sayre's extension splint, somewhat modified from an old splint which had been ordered for him some months before by one of his surgical attendants, and which he had never been able to wear with any comfort, and consequently without any benefit. I should mention that the attempt to obtain anchylosis, or nature's cures, so called, was made a year or two before I saw him, with partial success, by one of his attendants, if such a thing can be called a success.

FIG. 2.

There was an accident which happened to me in the treatment of this case, and which I should not fail to mention. Desirous one day to make greater flexion of the knee, after its long confinement in the cuirass, than I had heretofore made, and the patient resisting considerably, I broke his tibia, just below the knee-joint, or rather separated the epiphysis. Immediately I applied a plaster-of-Paris bandage to the whole limb, and after three weeks removed it, the leg having sustained no permanent injury whatever from this accident.

The boy wore the extension splint, and I continued weight extension to the limb for a few weeks only after he was removed from the cuirass. He now has less than one inch of shortening, wearing a shoe with a slightly raised sole, and has, I may say, perfect motion of the hip-joint, and can walk for considerable distances without crutch or cane, and is going to school every day. Of course the limb is still very much smaller and weaker than the other, after three or more years of arrested growth and disuse of it. He is gaining in strength and health constantly, and in time will have as useful a limb as could be desired. Figs. 3, 4, and 5, engraved from photographs of him taken about the first of last October, show his condition at that time, and which is constantly improving. Some weeks ago there was an exceedingly small sinus, very superficially seated under the skin, and rather low down, at the former site of one of the drainage-tubes, but was nearly healed, and of no importance.

FIG. 3.—Six Months after Operation.

FIG. 4.—Six Months after Operation.

FIG. 5.—Six Months after Operation.

Hip-joint disease of less than three months' duration, with abscess and rapid and extensive destruction of bone; at an earlier period mistaken for rheumatism, and hot poultices continuously applied to hip for five days; excision; death on ninth day, from rapid blood-poisoning.—G. M. B——, five and a half years of age, was first seen by me, March 24, 1886. Examination at once revealed the third stage of hip-joint disease, with well-defined abscess, which I aspirated the same day, and from which I drew off five or six ounces of pus. This

case was of less than three months' duration; and, about six weeks or two months before I saw it, was mistaken by a prominent surgeon of Denver for rheumatism, *and hot flaxeed-meal poultices were, by his directions, applied continuously to the hip for five days.* I found extension applied to the limb, but not properly applied, and of course the extension gave no relief, and the slightest movement caused severe pain in the hip. The pulse was variable, and from 120 to 160; but the strength was good, and, indeed, there was a surprising degree of vitality and will-power about this child. This encouraged me to hope for success from excision, which having been explained to the parents some days later, or rather the next day, I readily obtained their consent to perform, and at once ordered a wire cuirass to be made for the child by Brittain & Barber, model-makers, two enterprising and skilful mechanics of Denver. The temperature varied considerably. On the day after the aspiration it was 101.4° at 8 P.M. On March 27th, at 6 A.M., the temperature was 103.4°, and gradually falling; at 9 A.M., the following morning, it was 98.6° and twelve hours afterward was 103.6°; and the following morning it was only 100°. In the meantime I aspirated a second time.

On March 31st, the wire cuirass being ready, I excised two and one-half inches of diseased femur, and also removed some diseased bone from the acetabulum, and adopted the same treatment as in the preceding case.

The patient was etherized by Dr. A. Diedrichs, and I was assisted by Dr. H. A. Lemen, of Denver, and also by Dr. N. D. Estes. The little patient reacted well after the operation, and each day, and sometimes twice a day, the wound was thoroughly cleansed with a sufficiently antiseptic solution of carbolic acid, which so well promotes a serous discharge, and the wound was well dressed with oakum and suitably bandaged to express the forming pus from between the muscles and from the wound.

The temperature on an average was somewhat lower after than before the operation, yet it exhibited the same variable character, up and down, so that on April 3d, at 9 P.M., it was 99.5°, and on April 4th, at 6 A.M., 103°; and then declining was, at 6.30 A.M. on April 5th, 99.8°; and it ranged a little over 100° on the 6th and 7th of April, until 3 P.M. on the 7th, when it was 102.6°. At night, and at 1.30 A.M. on the 8th, and sixteen and a half hours afterward, I was hurriedly called to see her, and found the temperature 104.8°, and rapidly rising, and in a few hours she died.

FIG. 6.

At Fig. 6 is seen a Kaolatype, copied from a photograph of the piece of bone removed, and it shows how a quickly formed suppuration will, in a very short time, soften and destroy bone. Two-thirds of the head of the femur was destroyed, as may be seen in the figure, and the parts between the intertrochanteric lines, as seen in front, and also behind, are softened and much eroded. I was vigilantly on the alert against fatal blood-poisoning; in fact, the case was one of almost continuous or chronic blood-poisoning from the time I first saw it, and the operation afforded the only chance of life by removing the offending mass of diseased bone. There was no doubt in my mind that the danger of an open-wound antiseptic dressing of these cases was less than to close the wound, however aseptic the wound is made at the time of its closure. The danger of the burrowing of pus beneath and between the muscles is very great, which danger the oakum dressing, when properly applied, removes by absorbing and drawing to the surface, and thus gives a decided advantage to the Sayre dressing over other dressings. Moreover, the distention of the periosteal cavity with oakum, after subperiosteal excision, and until the cavity is sufficiently filled with granulations, is very desirable to preserve the shape of the periosteum while the new bone is forming from it, at the same time that a proper extension is made to prevent shortening as much as possible.

Fibrous anchylosis, following hip-joint disease of three years' duration; tenotomy; brisement forcé; restoration of perfect motion to the joint, with only one and one-eighth inch shortening.—I. B——, aged seven, of Loveland, Col., was placed under my treatment by Dr. Charles Denison, of Denver. The doctor accompanied the boy and his mother to my office, and fully agreed with me in the necessity of making an effort for his relief.

A photograph by Rinehart, of Denver, was taken of him the same day, which was some time last August, and from which an engraving was copied, as seen at Fig. 7, and which gives a faithful representation of his appearance at that time.

FIG. 7.

The little patient, some three years ago, fell and hurt himself, and soon afterward he complained of his hip, and finally Dr. Charles Ambrook, of Boulder, Col., recognized the complaint as hip-joint disease, and put a belladonna plaster over the hip, and recommended or applied treatment, as I am informed, after the plan suggested by Dr. Joseph C. Hutchinson, of Brooklyn, N. Y., that is, that the boy should use a pair of crutches, and wear a raised sole to his shoe on the well side. When I examined him last August, in the presence of Dr. Denison, we found fibrous anchylosis of the left hip, with very limited motion, and permanent contraction of the adductor muscles about the hip, and of the rectus femoris; also strong contraction of the tendo Achillis. There was about three and a half to four inches of shortening. The boy walked with a crutch, partly bearing his weight on the toes of the left foot. He went home, and returning to Denver last September, on the 18th of that month, after he was etherized by Dr. H. W. McLauthlin, assisted by Drs. Denison and W. H. Davis, I cut subcutaneously the adductor longus, gracilis, and rectus femoris muscles. After carefully closing the little wounds in the skin with successive layers of adhesive plaster, and applying a bandage, I proceeded at once to break up the adhesions about the joint, which being accomplished and free motion of the joint obtained, and without cutting the tendo Achillis, which I cut a week later, I applied plasters and bandages for making extension, and put him in a wire cuirass made for him by Brittain & Barber, of Denver. Ice-bags were packed around the hip, and a small bag of shot applied over the iliac artery, just heavy enough to lessen slightly the circulation in this part. The pressure of the bandage over the point where the rectus femoris was cut gave me a little trouble, and threatened an abscess at this part, but which was averted by the application of an ice-bag and iodine, and by a different arrangement of the

bandage. Passive motion was commenced at the end of two weeks, and but for the inflamed part in the groin alluded to, the motion could have been used more freely. However, perfect motion was obtained, with freedom from all pain; and after he had been in the cuirass for about three weeks he was removed from it, and extension with weight and pulley alone used. Brittain & Barber made for him my modification of the Sayre and Shaffer splints shown at Fig. 10, and which he wears now, more as a support to the limb than as an extension apparatus, of which he is not much in need, as there is no soreness or disease of the joint.

Figs. 8, 9, and 10, engraved from photographs of him five weeks after the operation, show his condition at that time, and a letter received from his mother to-day (November 23d) says he is doing "splendidly." He has one and one-eighth of an inch shortening, and wears on the left shoe a cork sole to correct this; and after he has developed the weak muscles of the formerly disused limb, will be able to walk with ease and comfort.

FIG. 8. FIG. 9. FIG. 10.

Remarks.—I believe that such cases as the above promise the most satisfactory results; but the principles of treatment of hip-joint disease are as necessary and as applicable to these cases as to the worst.

Mr. J. T——, living near Denver, consulted me on the 18th of last May about his son, aged between six and seven years, and who had partial anchylosis of the hip-joint, resulting from previous disease of the joint. The limb was fairly well developed, and offered a fine prospect of success from *brisement forcé*, without tenotomy. The father, being a wealthy German, preferred to take his son to Germany, but with what result I am not able to say.

As illustrating the importance of an early recognition of hip-joint disease, I shall allude to the case of a child, three and a half years old, and son of Mr. F. S——, of Denver, which case, on the 15th of August, 1868, Dr. H. A. Lemen, of Denver, requested me to see with him. He rightly thought the case one of hip-joint disease, affecting the left hip, and our joint examination fully favored this opinion. Yet at the time, the patient being naked and placed on the carpeted floor for examination, I thought I detected more or less rigidity about the right hip, as well as about the left one; and on bringing the right popliteal space down so as to touch the level surface on which the child was placed, the pelvis on that side also tilted upward, and I spoke of this to Dr. Lemen at the time. However, there was no pain about this hip, or any pain that could be referred to the joint on this side. I was somewhat puzzled, but not convinced that there was any disease of *this* joint until later. Dr. Lemen at once turned the case over to me for treatment; and I had the child confined to bed and applied extension to the left limb only, and in the line of the deformity, for two weeks; but finding that I failed to properly prepare the limb for the extension splint ordered for him, I re-examined the muscles about the groin, and discovered that tenotomy was needed. So on the 30th of August, the patient being etherized by Dr. W. H. Davis, of Denver, I cut the rectus femoris and adductor longus muscles, and in two weeks more the limb was ready for the extension splint, which was applied, and which the child continued to wear with comfort and benefit until the right hip showed unmistakable signs of disease. This required the extension splint to be removed, and the child to be put to bed again, and I applied extension to both limbs, and requested Messrs. Brittain & Barber to alter the waistband of the splint, and to make an extension splint also for the other side. The child has been in bed for some weeks, but his general condition has improved under the use of the extension, and nearly all soreness has left the right hip, as well as the opposite one, so that he is now about ready for the double-extension splint. This case has been troublesome to manage, as it has been difficult to keep the bandages clean, notwithstanding rubber drawers pulled over them, as the child frequently wets himself, and the bandages become offensive from the decomposing urine, and loosen the plaster and excoriate the skin; so that I am compelled often to change them, powder the excoriated surface with iodoform, and resort to such expedients to I can best adopt to keep up a continuous extension on the joints, and rightly applied. But the child sleeps well at night, is free from pain, and only suffers when the extension is off; his appetite is good, and he is advancing satisfactorily.

Although this child has a strumous appearance, yet I believe with Dr. Sayre that the strumous diathesis is made to play too prominent a part as the cause of hip-joint disease; and in this connection, and as explaining the origin of the disease in both hips in this case, I shall briefly relate a part of its history, which I did not know at first: Just before Christmas of 1885 the child, as the mother relates, slipped and fell on a wet, slippery oil-cloth, with both legs stretched widely apart. He complained the next morning of pain in both hips, and continued to be ailing; was better and then worse for some time; he was stiff every morning, and after playing for a while his joints would become more supple, and he would seem all right. For a considerable time the parents did not think the matter serious, but last summer took their child to Dr. Lemen, their family physician, who at once recognized the nature of the complaint.

In this case I mentioned that for two weeks I failed to properly prepare the limb for the extension splint, until I did tenotomy of some of the muscles.

This may happen to the best surgeon.

During last August Dr. Edmund J. A. Rogers, of this city, requested me to see with him a case of hip-joint disease in a little girl, three and a half years of age, the daughter of Mr T. J. M——, of Denver. The case was of eighteen months' standing, and was at first seen by another surgeon, who provided for the child a Taylor's hip-joint splint, and which she was wearing at the time I first saw her. The instrument caused more or less discomfort and pain each time, after being worn a while. An examination of the child showed that the thigh, on the afflicted side, was flexed on the pelvis; and in attempting to straighten the limb the pelvis was tilted upward. The adductor longus and rectus femoris muscles were rigidly contracted, and required tenotomy. On August 21st, Dr. Rogers having etherized the child, I cut the adductor longus, rectus femoris, and tensor vaginæ femoris fascia, and immediately I could straighten the leg without the pelvis tilting upward. The child was put to bed and an extension of three pounds weight applied. Dr. Rogers requested me to take charge of the case, and after ten or fifteen days of extension in bed I had the

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treatment of hip-joint disease. The smaller spiral spring is made strong enough to keep the weight of the body from stretching the adhesive straps, which are designed solely for extension at the hip joint. This spring can be loosened or fastened, and moved up or down for an inch or two, by means of the same key that is used to extend or rotate the limb.

Clinical Department.

INTUBATION OF THE LARYNX FOR DIPHTHERITIC CROUP IN A CHILD NINE MONTHS OLD—RECOVERY.

Dr. Homer O. Bates, Physician to the Children's Department Chicago Policlinic, reports the following case: "On Monday, August 30th, two children were brought to me suffering from diphtheria. The first, Lillian S——, four years old, received a supporting and stimulating in treatment, local applications of the persulphate of iron in glycerine being made to the throat. The case terminated favorably, though for several days the child was very hoarse and could not speak audibly. The second child, Gertie S——, nine months old, had patches of false membrane on the fauces and right tonsil. She was put upon the same course of treatment as her older sister, but on the following day I was telephoned for, as the baby was suffering from frequent attacks of dyspnœa. I found the family living in a brick structure, badly ventilated, and filled with unpleasant odors. I ordered carbolic acid to be used freely in boiling water kept constantly on a stove, and to be sprinkled around the house. The following morning the child was evidently failing rapidly. There was lividity of the face, and the respiration was labored, with recession of the chest-walls at each inspiration. I suggested intubation to the parents, who readily gave their consent. Dr. Frank E. Waxham was called and came immediately, and we assisted him in the introduction of a laryngeal tube of small calibre. There was almost immediate relief; the child had not slept for several hours, but now went to sleep, being awakened at intervals of half to one hour by quite severe attacks of coughing. She was allowed to nurse frequently, only little at a time, as it provoked coughing. In the evening, eight hours after intubation, I found respiration easy, but the temperature was 103⅘° F. in the groin. Antipyrin was given in six-grain doses every six hours by the rectum, and the temperature was reduced to 101⅘° F. in twelve hours. But the little patient was in a critical condition, there being sonorous and sibilant râles and ominous, dry, tubular respiration all over the chest; face livid; pulse irregular, rapid, and feeble; respiration imperfect and sighing; urine scanty.

"There being evidences of diphtheritic bronchitis, a prescription of carb. ammoniæ, gr. j.; potass. acetat., gr. iv.; tr. nucis vomicæ, ♏ j.; syr. ipecac, ♏ x.; in syr. glycyrrhiza, to be taken every two hours. The relief was very pronounced; moist râles were heard in the evening over whole chest, and the next morning the temperature was 101⅘° F. in groin. From this time on the babe improved, though signs of diphtheritic bronchitis continued for some time. The tube was left *in situ* until the morning of the fourth day, and the medicine was gradually withdrawn during a period of twelve days. A strong solution of carbolic acid was kept boiling in the room, and this no doubt had a beneficial effect, and I would most certainly recommend this procedure to be rigorously carried out in all cases of diphtheritic croup."

VACCINATION FROM A SYPHILITIC CHILD WITHOUT SYPHILITIC INFECTION.

Dr. Charles Rosewater, of Omaha, Neb., writes that in reading a note on syphilis from vaccination in a recent issue of The Medical Record he was reminded of a case which Dr. Fürth related last winter in the Policlinic at Vienna, Austria. When he was in charge of the Foundling Hospital there he vaccinated a number of children one day from the arm of a child which at the time was apparently healthy. Several days later the latter broke out with a syphilitic eruption. The children vaccinated from it had already been distributed to various points in the country, but Dr. Fürth feeling the great responsibility resting upon him, took special pains to hunt up each child and keep it under observation for some time. Not one of the children vaccinated from the syphilitic child had syphilis or showed any signs of it during the several months that it was watched. Reasoning from this case Dr. Fürth concluded that vaccination with the pure lymph from a syphilitic child will not produce syphilis, and that it is only when blood has been mixed with the lymph that syphilis is imparted in vaccination.

DISLOCATION OF THE THIRD CERVICAL VERTEBRA WITH DEATH ON THE FIFTEENTH DAY.

Dr. J. J. Best, of Martinsburg, W. Va., sends us the following interesting history under the above caption: "On October 19th W. F——, aged nineteen, fell from the top of an old willow-tree to the ground, a distance of thirty feet. Dr. W. J. Best was summoned, and found him completely paralyzed from his shoulders down—both motion and sensation being lost; the left femur was fractured at the lower third of the shaft. He was perfectly conscious from the moment of his fall to his death—which occurred on the 3d inst. By a gentle pressure of the finger at the third cervical vertebra, his eyes would roll upward and backward into the sockets—breathing became stertorous, and he would lapse into unconsciousness if the pressure was kept up for a moment. All available means failed to excite the lost motion and sensation. His bladder had to be emptied with a catheter, and the intestines evacuated by enemata. Rapid emaciation went on from the onset. His death occurred on the fifteenth day from the time of injury. I was present and conducted the examination, post-mortem, which revealed that the third cervical vertebra was dislocated forward and downward—closely compressing the spinal cord at the lower portion of the bone. The spinous

process of the fourth cervical vertebra was fractured. There were no other serious injuries. Death was clearly the result of the compression of the cord. Had the upper portion of the third cervical vertebra compressed this cord equally as much as the lower, I believe death would have been instantaneous. Union of the fractured femur had begun."

Progress of Medical Science.

TREATMENT OF UTERINE FIBROMATA BY ELECTRICITY.—At the French Surgical Congress, held in October, Dr. Apostoli read a paper, supplementary to a memoir published two years ago, in which he urged the claims of his method of the electrical treatment of uterine fibromata, as being novel, rational, precise, and easily borne by the patient. The treatment is continued through a period of from three to nine months, the galvano-cauterization of the uterus being repeated at suitable intervals. The author claims to have obtained positive results in at least ninety-five per cent. of the cases treated. The tumors were reduced in many cases to one-half of their former volume, but never entirely disappeared. The hemorrhages were definitely arrested, and the signs of compression were made to disappear, while the patients were greatly improved in their general condition. The cases of unsuccess were all those of fibro-cystic tumors.

AN EPIDEMIC OF FURUNCLES.—Dr. Hergott reports a series of observations relating to a little epidemic of boils occurring in the Maternity Hospital at Nancy. Five women were attacked, one after the other, by an eruption of furuncles on the gluteal region. The epidemic was traced to the use of a vessel which had not been properly cleaned, for, as soon as it was thoroughly disinfected, the boils ceased to make their appearance.—*Annales de Gynécologie.*

CIRCUMCISION IN DIABETES.—One of the most distressing of the minor symptoms in glycosuria is pruritus of the meatus in those whose prepuce covers the glans. The prepuce often becomes parchment-like, and cannot be retracted, and this chronic condition of phimosis renders the itching almost intolerable. Landouzy, a quarter of a century ago, asserted that surgical operations should never be attempted in diabetic patients; and since that time many other authorities have counselled against interference of this nature. Dr. Francon, however, reports, in the *Lyon Médical* of October 24, 1886, some cases of phimosis in patients affected with glycosuria, in which the operation of circumcision was followed by the happiest results. The author concludes that circumcision, performed under strict antiseptic precautions, is indicated in diabetes, whenever the pruritus penis is so pronounced as to cause the patient serious annoyance or distress.

HEMI-RHEUMATISM, OR THE ONE-SIDED PREDOMINANCE OF MANIFESTATIONS OF CHRONIC RHEUMATISM.—Dr. Cazalis draws attention to a feature of chronic rheumatism which he and others, as well as Dr. Demeaux, have frequently observed. His conclusions are as follows (*Bulletin de l'Académie de Médecine*): In more than two-thirds of chronic rheumatics there exists, in some cases during a long period, a tendency to arthritic manifestations, external or internal, predominating on one side of the body; and sometimes this predominance is such that these cases might be called hemi-rheumatics. In these hemi-rheumatics the right side appears the most frequently affected. When pulmonary congestion, or bronchitis of an arthritic nature, shows itself in these patients, these conditions oftener appear on the side in which the rheumatism preponderates. It is on that side is observed that pleuritic friction which M. Collin (de Saint-Honoré) has considered to be an indication of arthritism, and which, with M. Cazalis, corresponds to the friction or crepitation of the joints in dry arthritis. As hemi-rheumatism is oftener observed on the right side, one understands why M. Collin at once localized his pleuritic friction on the right side. On the side on which rheumatism predominates, is also more frequently observed that other and more constant sign of chronic rheumatism—some time ago recognized and described by M. Verneuil and M. Potain—the deformity and projection of the great toe. If, in simple chronic rheumatism, hemi-rheumatism appears oftener to affect the right side, hemichorea and hysteria, on the contrary, which to many practitioners of the present day seem to be transformations of arthritism from one generation to another, more frequently affect the left side. Now, if hemicrania is added to these arthritic attributes, a singular tendency to hemilaterality will be recognized in all these arthritic modifications. These facts seem to support the still uncertain theory, but which is becoming more and more in favor, that the central nervous system greatly influences the localization of these chronic rheumatic manifestations.

AN EPIDEMIC OF PARONYCHIA.—Dr. Audry reports, in the *Lyon Médical* of October 24, 1886, an epidemic of "runround" affecting the pupils in a school of which he was the medical inspector. The first case occurred in a girl nine and a half years of age, who had a panaris on the tip of the middle-finger, about the nail. The trouble lasted about two months, and seemed to have affected the child's general health, as she became pale and anæmic. Following this case, twelve of the other children, in addition to the teacher, had superficial paronychia, affecting in every instance the fingers of the right hand. The index was the finger most commonly attacked, but one child had panaris of two fingers, and in the case of the teacher the thumb and four fingers of the right hand were affected one after the other. Examination of the purulent fluid from the runrounds showed the presence of a few staphylococci and numerous streptococci. From a study of these cases the author concludes that runround is a contagious affection, and may occur as an epidemic in cases in which large numbers of children are together in one place, as in a school. He advises that children with paronychia be forbidden to come to school while the affection lasts, or, if allowed to attend, that they be kept isolated as well as possible from their mates, the finger being covered with a light antiseptic dressing.

A CASE OF BACTERIURIA.—The following curious case is reported by Drs. Schottelius and Reinhold in the *Centralblatt fur Klinische Medicin*, No. 37, 1886. A man, aged forty-five years, was admitted to the hospital, suffering from dropsy following mitral disease. There was also tolerably well-marked albuminuria. The œdema disappeared after rest in bed without medication, and the albumen disappeared from the urine. But further examination of that fluid revealed the presence of large numbers of bacilli. They were found in the freshly voided acid urine, even after it had been passed two or three times through the filter, and gave to this fluid a peculiar glistening cloudiness which did not disappear on warming, or the addition of nitric acid. On the other hand, the cloudiness was not increased to any appreciable extent by boiling, and the subsequent addition of nitric acid. There were no signs pointing to disease of the kidneys, bladder, or urethra, and [illegible] tions of the blood failed to reveal the presence of micro-organisms in this fluid. Microscopic examination of the urine showed every drop [illegible] countless numbers of bacilli. The[illegible] times as long as they were [illegible] longer rods, which were sometimes [illegible] threads, showing, however, [illegible] points of union of the individuals in the urine itself [illegible] fluid seemed to be already [illegible] to be unable to supply nutriment. In bouillon and various vegetable infusions bacilli grew with great rapidity.

end of about three days, the rods broke down into spores of slightly oval shape and of comparatively small size; but in the urine no spores were found. Inoculation experiments upon animals gave negative results. The patient is still in hospital under treatment for his cardiac trouble, and the writers express the hope that a post-mortem examination will serve to throw some light on the nature of this puzzling case.

Diagnostic Value of the White Streak in Scarlatina.—This phenomenon, which can be produced by rubbing a soft body upon the skin which is affected with the scarlatinal eruption, is considered an important diagnostic sign of scarlatina. When, in the normal condition, one draws a line upon the skin with a smooth surface, as the rounded extremity of a pencil, and uses moderate pressure, there may be observed at the points touched a white line which lasts for some time. This paleness is due to the moderate excitation of the vaso-motor nerves, and the contraction of the smaller vessels which follows it. If the pressure has been very strong, in place of a white line a red line bordered by two white ones is produced. The excitation in this case has paralyzed, temporarily, the small vessels instead of contracting them, while in the area which is contiguous, where the pressure has been less strong, the excitation has only led to constriction of the vessels. In certain diseases the effects which are obtained by this procedure vary greatly. Trousseau, for example, has shown that in patients suffering from meningitis, a red line is produced by pressure with the greatest ease, and this has been called the meningitic line. It may also be produced in all the diseases which lead to perturbation of function in the nervous system. Thus, it may be produced in many cases of typhoid fever, in erysipelas, variola, rubeola, and the diphtheritic eruptions. But it is not the same in appearance in scarlatina during the entire period of the eruption. In place of getting the red meningitic line, a pale, rather persistent line is produced, which extends plainly to the bottom of the eruption. This fact was long ago noticed by Bouchut, and was considered a valuable sign as a means of diagnosis, both in children and adults. It is not equally prominent and distinct at all periods of the eruption, Velpeau having observed that it is not produced when the efflorescence of scarlatina is at its highest degree of development. In the diphtheritic eruption which resembles that of scarlatina accompanied by angina, the excitation of the skin produces a red line, and not the white one of scarlatina. This sign is especially valuable in those cases of measles in which the eruption closely resembles that of scarlatina. The same is true in variola, in which other differential signs are often absent. It must be borne in mind that the important feature in making this test is that the white line appears upon the surface which is covered by the eruption.—*L' Union Médicale du Canada.*

The Treatment of Whitlow and Sprains.—Dr. John Chiene writes as follows on the treatment of whitlows and sprains: In deep-seated digital inflammations over the first and second phalanges, the cause is either an inflammation of the flexor sheath or periosteal in origin. In inflammations over the anterior aspect of the terminal phalanx, the cause is periosteal, and the worst that can happen is necrosis of the terminal phalanx. In all cases make your incision early, central, and in the long axis of the finger. Relieve tension, and prevent spread of the inflammation from the flexor sheath on the finger to the common flexor sheath on the anterior aspect of the wrist. In periosteal cases early incisions prevent necrosis of the affected phalanx. Whitlows are infective conditions, and are due to a colony of micrococci. The periosteal whitlows are cases of acute suppurative periostitis. The infective character of these conditions must not mislead the surgeon into supposing that careful antiseptic precautions are unnecessary. Sepsis and infection are perfectly distinct conditions. Relieve the tension, and the evil effects of the pathogenic micrococci will soon subside; prevent sepsis, caused by the entrance of septic organisms from the external air, and rapid healing will be the result. In patients who are liable to whitlows, as in people who suffer from boils and carbuncles, administer corrosive sublimate internally; it is a most powerful anti-fermentative. In sprains, carefully applied elastic pressure, with wadding, combined with massage and passive movement, gives the best results. In diagnosticating an injury look before you touch a limb. Remember the normal relations of the styloid processes in diagnosticating injuries in the region of the wrist; the relation of the head of the radius to the external condyle of the humerus in the elbow-joint; and let the coracoid process and its relation to the head of the humerus be the principal guiding landmark in injuries of the region of the shoulder. Always expose the uninjured corresponding region, examine it in the first instance, and let it be your standard (having satisfied yourself that it is normal) in diagnosticating the injury on the opposite side.—*Edinburgh Medical Journal.*

Rheumatismal Thyroiditis.—Dr. Carrié relates the following case, in the *Journal de Médicine de Paris*, of October 17, 1886. He was called to see a woman, forty years old, a domestic, who had fever, vague muscular pains, headache, and a sore throat which rendered deglutition exceedingly painful. The woman was robust and had always enjoyed excellent health. There was no submaxillary swelling, the tongue was covered with a white fur, and there was no appetite. The pharynx was uniformly red, the tonsils were hardly at all swollen, and were free from any membrane, the uvula was slightly œdematous. An emetic and a cathartic were prescribed. The following morning there was little fever, swallowing was less painful, but the fauces were very red, the color being of a deeper hue around the pillars. Frequent hot emollient gargles were ordered, with a Dover's powder at night. The trouble subsided in a few days. Eleven days later the woman again applied for relief, saying that she had pain in the neck, and she believed also that there was a little swelling there. This swelling increased and was found to be located in the thyroid gland, which was very tender on pressure. Movements of deglutition were very painful, the distress not being in the throat but seated lower down, and motions of the head also caused severe pain, so that the patient had the appearance of a person suffering from torticollis. Belladonna ointment was applied externally, and one drachm of salicylate of sodium was administered, Dr. Carrié regarding the case as of a rheumatic nature. The following day there was very little pain. The salicylate was repeated in the same dose, and the next day there was no pain, and the swelling had almost entirely disappeared. A week later the patient had an effusion into the knee-joint, which disappeared under treatment by salicylate of sodium and sulphur baths.

Puerperal Tetanus.—Dr. W. Netzel related the following case at a meeting of the Swedish Medical Association (*Hygiea*). A primipara, twenty-five years old, was sent to the obstetrical clinic thirty-six hours after labor pains had begun. The fœtus was dead and was strongly engaged in the pelvis. The os was only slightly dilated and very rigid. The fœtus was extracted after perforation of the head, and the uterine cavity was then washed out with a three per cent. solution of carbolic acid. At the end of four days the body temperature began to rise, and the discharges acquired a foul odor. On the eighth day there appeared trismus and rigidity of the neck, and then followed opisthotonos and tetanic convulsions, and the patient died in two days. The autopsy showed a rupture of the cervix, the tear extending so as to involve the peritoneum. There was parenchymatous degeneration of most of the internal organs. The brain, spinal cord, and meninges were markedly hyperæmic. The author regarded the tetanus as symptomatic of a general infection received by the patient during the first stage of labor.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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COUNTRY DOCTORS AND HARD THINKING.

THE writer who recently characterized the country physician as a man who could do little and could think less, has evidently barked up the wrong tree. We are so constantly receiving, from all parts of the country, just protests against his idea, that we are willing to take a side in the argument.

Statisticians have not yet proved that brains are indigenous to any particular region. In fact, transportation being just as cheap for a full, as an empty, head, there is no embargo on the freest possible distribution of the commodity over the country. Surroundings, too, have a great deal to do toward developing wit and mental power. In olden times the favorite simile for progress was the best foot forward. Now it is the best head forward. We have reason to believe that heads are pretty evenly distributed over the country. At least they have been bobbing up quite promiscuously and plentifully over the general fields of medical literature, and make as good a showing in one locality as in another.

The quality of grain can speak for itself if left to itself. It is not the question where you come from so much as what you are. The seed always produces its kind, and generally the hardier the soil the sweeter the fruit.

Emergencies and surroundings are everything to bring out the qualities of mind or body. Nothing quickens a man's perceptions more certainly, or develops more surely his inner practical resources, than the consciousness that he has to think with his own brain and act with his own hand. Thinking, and hard thinking at that, becomes a habit with such men, and the working out of their own salvation is an acknowledged necessity.

When any writer presumptuously says that a country doctor never does any hard thinking, he has evidently never met even the average representative of that class. We modestly venture this assertion because we have seen the country doctor under all circumstances; have oftentimes worked with him in his own fields of practice; have been in communication with him in many other ways, and we believe we know the man.

All other things being equal, the only difference between the metropolitan and rural practitioner is in the surroundings. The former is in a position to have plenty of help and very many, if need be, to think for him; the latter is generally alone in an emergency and has to do his own thinking. The country doctor's mental guy-ropes are his own experience and that of the marshalled authorities in his library; the metropolitan practitioner can, if he chooses, fasten the different tendrils of his web to the door-posts of all the experts and specialists in his neighborhood. Counsel in the city is the rule, in the country it is the exception.

The country doctor is expected to be ready for anything, and he generally is. Besides being a student he is expected to be thoroughly practical in all his methods. He has not, it is true, all the modern appliances at his command. One old-fashioned speculum may do all the business of two or three generations, occupying large and small compartments alike, common to young, middle aged, and old, changing in office from the grandmother to the granddaughter, and yet the average of cures for leucorrhœa, abrasions of the os or cancer of the cervix, may even equal those obtained in the Woman's Hospital.

The same might be said for other departments of his practice. He cannot pick his instruments from hundreds in the hospital closet, cannot have skilled assistants at every turn, and antiseptic solutions everywhere, nor has he skilled attendants to watch for temperature rises, secondary hemorrhages and the like. His fracture cases are generally miles from his office with no friendly assistance at hand to loosen the damaging grip of an unyielding bandage.

It goes without the saying that the country doctor must of necessity learn to help himself, and if he cannot do it with his brains he certainly cannot with his hands. The instrument is one thing and the brains behind it is another, and, alas! very often we may say *vice versa*. The hard, square thinking generally strikes the balance the right way.

During his solitary drives he must do the mental sorting of his cases and place each in its own category. And here is where the thinking must come in, and where seeming difficulties must smooth themselves to the common-sense level of practical experience.

It is within the experience of many a country doctor that between miles of drive he may meet, single-handed, every variety of disease in any of the different departments of practice. At one end of the road may be a breech presentation, at the other a herniotomy. His ear must as perfectly recognize the crackling râle of an ominous pneumonia, and the husky sibilance of an urgent croup, as the grating crepitus of a fractured bone, or the clicking ring of sound and stone. To string these varied experiences into consistent practical work, requires something more than shallow reasoning or careless guesswork. And yet we are fain to believe that this is the ordinary business of the general practitioner in the country. It is this training, forced upon him by circumstances, which must necessarily make him a reasoning and practical man. He is to our mind the beau-ideal of a general practitioner, forced to be ready for everything, and afraid of nothing. The whole body belongs to him, and he does his best with each part. Every subject connected with its diseases must necessarily interest him. He is, *per force*, a reader, a thinker, and a doer. His very habits make him the best judge of the practical work of others, as he must weigh the evidence in favor of new methods before he dares assume the responsibility of their

trial, as he alone will be accountable for evil results. It does not matter how much of the lung is involved in inflammation, the patient's friends watch for the fever to be reduced. Nor do they care to know the character of a urinary cast so long as proper diuresis is induced. The cause of a diarrhœa is of no interest to the patient if the discharges are not stopped. The man with retention of urine may never have heard of the prostate gland, but he wants to urinate. The good woman with the momentary expectancy of maternity does not care for the presentation, so long as she can get the baby in good time.

In all his cases he is brought face to face with his patients. He must treat all their diseases, and with reasonable success. To do this must require some intellectual effort. If we judge only by the results, we are free to make comparisons. Certainly his statistics do not perceptibly weigh down the mortuary record.

We are tempted to take sides with the country doctor because, unfortunately for him, he does often enough assert his claims. When the latter is the case he generally writes something worth reading, and founds his observations on what he has seen, what he knows, and what he has thought out for himself.

PNEUMOTOMY.

We predict that there will yet come a time when we shall have pneumotomies and pneumotomists in surgery, just as we now have ovariotomists and ovariotomies. Already pneumotomy has made much headway, and has encountered far less opposition than did laparotomy. Since the lungs are the most frequently diseased of all organs, the surgical opportunities which they invite may develop almost indefinitely.

A successful pneumotomy, recently performed at the Hôpital Trousseau, by MM. Prengrueber and de Beurmann, illustrates so clearly what the operation is capable of doing, as well as its comparative simplicity, that we venture to give an account of it.

A child of twelve years entered the hospital with a history of having been ill for four years. Six months before admission it had been suddenly taken with fever, pain in the right side, and vomiting of blood. It improved for a time, then relapsed, and on admission to the hospital was found to have a good-sized cavity in the lung. The child's expectoration was very fetid, and a gangrenous process was diagnosticated. No tuberculosis was present, judged by the absence of bacilli from the sputa; and it was supposed that the gangrene and excavation had been caused by the breaking down of a broncho-pneumonic process or of a suppurating interlobar pleurisy.

A U-shaped incision was made in a line with, and below, the lower angle of the scapula and the tissues cut through to the bone, a circular wound ten centimetres in diameter being made, at the bottom of which lay the fifth and sixth ribs. The periosteum was incised in a longitudinal direction, and very carefully dissected off the rib. About two inches of each rib was then removed.

A fenestrum had now been made in the thoracic wall, of which the vertical walls measured seven to eight centimetres, the horizontal five centimetres. At the bottom of the wound the lung could be seen bound firmly to the wall by adhesions of the visceral and parietal pleura. The lung was now penetrated by a thermo-cautery moderately heated. After it had reached a depth of three centimetres it entered the cavity, as was evidenced by the exit of fetid gas and secretions. The opening was enlarged so that a finger could be passed into the cavity. It was left to drain itself without any washing or disinfection. The operation lasted only three-quarters of an hour, and there was no loss of blood; air passed freely in and out of the thoracic wound. The expectoration became gradually less fetid and smaller in amount, and by the fourth day the communication of the cavity with the bronchi had closed. The cavity was then for the first time systematically washed out, and began to heal up. At the end of three weeks the healing was not complete, nor had the fetor entirely disappeared, but the general condition of the patient was excellent and showed plainly the efficacy of the operation.

RECENT STUDIES OF TUMORS OF THE MESENTERY.

It is a well-established fact in pathology that new-growths of any kind rarely develop primarily in connection with serous membranes. It might be expected, perhaps, that the mesentery, if any place, would develop such growths, since it is the seat of such a constant ebb and flow of fluids surcharged with the products of gastro-intestinal activity. Yet very little attention has been paid to the study of the matter, and it is only in late years, when the frequency of laparotomy has made an investigation of the condition of the mesentery more common, that definite contributions to the neoplastic history of this tissue have been made. According to the *Gazette des Hôpitaux*, M. Péan has reported some cases of primary and secondary tumors of the mesentery in his work on the "Diagnose et Traitement des Tumeurs de l'Abdomen." Dr. Terrillon has also published a very detailed account of lipomas of the mesentery in the *Archives de Médecine* for April, 1886. We are, however, indebted to Dr. Victor Augagneur, of Lyons, for a thorough study of the whole subject, based upon the histories of eighty cases. Dr. Augagneur finds that the tumors of the mesentery may be classed as follows: Lymphangiomas, cysts, lipomas, fibromas, sarcomas, carcinomas, "embryomas," and ganglionic tumors of dyscrasic origin (tubercular, syphilitic, leukæmic, etc.). The rarest class of tumors is the lymphangioma, of which only two cases have been reported.

On the other hand, the most frequent of mesenteric tumors are the cysts. These constitute a third of the whole number, and are hydatid, serous, or bloody in character, the latter being produced generally by traumatism. The lipomas are rarely pure in type, but are mixed with some other anatomical elements, the myxolipoma being most frequent.

It is doubtful whether fibromas are ever really found in the mesentery. One case alone has been reported, by Péan, and some uncertainty as to the true nature of this is expressed.

Malignant growths very rarely, if ever, attack the mesentery primarily. Those which are oftenest found in it are sarcomas and lymphomas.

The question whether a mesenteric tumor can be diag-

nosticated is discussed by M. Augagneur at length, and he comes to the conclusion that their existence may be determined when an intra-abdominal tumor is present which unites the three following symptoms: Situation in the median line, great mobility, a tympanitic zone anterior to and below the tumor. If the general condition permits the exclusion of malignant tumors, the diagnosis will probably lie between a lipoma and a cyst. The diagnosis between these two can be determined by fluctuation and exploratory puncture. For the cysts the best treatment is capillary puncture, or if this is impossible, laparotomy, with drainage or ablation.

The lipomas are rapidly growing tumors, and need surgical interference early. In most of the cases death has followed in three years.

THE OPERATION FOR THE RADICAL CURE OF OTORRHŒA.

SINCE the foundation of a more correct system of aural pathology, due mainly to the labors of Toynbee, treatment of diseases of the ear has rested upon a much more secure basis, although, as in all departments of medicine, a great deal of unnecessarily meddlesome, not to say injurious, treatment still prevails. Indeed, the acquirement of a knowledge of the special anatomy and pathology of the ear, together with dexterity in the examination of the fundus of the organ, requisite to accuracy in diagnosis as well as to successful treatment, is attended with difficulties scarcely exceeded in any other branch of surgery, and comparatively but few have cared to devote their time to research in a field apparently so limited.

Many of our colleagues can remember when the resources of aural surgery were almost confined to indiscriminate syringing and the introduction of caustic and astringent medicaments, and we feel sure that no one will regret that in the more irremediable cases of chronic purulency of the middle ear, a successful surgical treatment, promising a radical cure, is likely to take the place of protracted and temporizing methods. This advance has been largely due to the operative procedures undertaken for the relief of deafness and tinnitus resulting from chronic catarrhal and chronic purulent inflammation of the middle ear, notably by Kessel and Schwartze; they have shown that extirpation of portions, or of nearly the entire transmitting mechanism, was sometimes succeeded by the disappearance of purulency. In Professor Schwartze's recent work on the surgical diseases of the ear (1885), he states that in removing the "otherwise incurable obstructions in the transmitting mechanism of the tympanum," where great deafness and tinnitus existed, the middle ear may be more successfully treated. Schwartze cites three examples of chronic purulent inflammation of the middle ear in which he operated, and he states that, according to Kessel, excision of the malleus may cure purulent discharge as well as remove distressing tinnitus and improve the hearing-power "in cases of large defects of the drum-head, with caries of the handle of the malleus, when the discharge had been considered incurable."

Since Schwartze's operations were, however, seemingly undertaken where much of the membrana vibrans remained, and probably with a desire to relieve the patient of tinnitus and deafness mainly in view, his success in curing the otorrhœa was not marked; Schwartze's operations, however, were seemingly undertaken where a large portion of the drum-head remained, with a view mainly to relieve deafness and tinnitus, and as the removal of the incus is not mentioned, it was probably allowed to remain. The incidental relief or cure of otorrhœa in his cases was not marked, and, moreover, the drum-head was generally reproduced. The operation now practised in this country by Dr. Sexton is for the cure of otorrhœa alone, and is exceptionally recommended where, from the presence of a portion of the drum-head, and a connection between the incus and stapes, any considerable hearing power remains. Dr. Sexton regards it as exceedingly important to remove the incus—not the least difficult part of the operation. Professor Schwartze removed the malleus by casting a snare over its handle, a procedure found to be difficult when bleeding was free; besides, it is alleged that the handle of the malleus is liable to be broken off by this method. The difficulties having been overcome by experience and the use of suitable instruments for the removal of diseased structures, we cannot see why, if a cure can be speedily effected by an operation so safe in skilful hands, excision of the ossicles may not take its place in aural surgery. In the cases usually selected for operation a morbid fringe of drum-head along the superior margin of the tympanic ring alone remains; the diseased malleus and incus, usually displaced, are found stowed away as useless rubbish in the attic of the tympanum, while more or less necrotic tissue is retained in both the attic and antrum, giving rise to a chronic discharge which resists ordinary treatment.

INFLAMMABLE BREATH.

THE note of Dr. F. E. Quimby, in THE MEDICAL RECORD of November 27, 1886, concerning the case of a man who, as he was blowing out a match, had an eructation from the stomach of gas, which ignited and burned his face, has called forth a number of communications from correspondents referring to reports of similar cases.

A gentleman of this city writes that Lauder Brunton, in his work on "Disorders of Digestion," quotes a case reported by C. Anton Ewald. The patient was surprised to find inflammable gas issuing from the mouth. Ewald collected the gas and analyzed it, finding it composed largely of marsh gas, though it was by no means identical in composition and physical characters with this gas. The source of the gas is chemical change in the food and mucus occurring in the intestinal tract in some forms of imperfect digestion, whence it passes through the open pyloric and cardiac orifices of the stomach.

Dr. F. C. Clark, of Stillwater, Minn., suggests that the gas was similar in composition to that which escapes from the rectum, and which, as is well known, is inflammable. The phenomena is due to the presence, in small quantities, of hydrogen sulphide, which is produced by the decomposition of organic matters containing sulphur.

Dr. F. C. Shattuck, of Boston, mentions Ewald's case, and also one related by Senator, in which large quantities of sulphuretted hydrogen were belched from the stomach. Lauder Brunton gives the details of these cases in an article published in *The Practitioner*, for 1880, vol. ii., p.

267. According to the *Medical Times and Gazette*, for 1875, Ewald's case was the third that had been reported up to that date.

Dr. William Graham, of Brussels, Canada, refers to the reports of a number of cases of this nature. One case is related by Dr. Beatson, in the *British Medical Journal* of February 13, 1886. The patient had been troubled with eructations having a very disagreeable odor, and one night when blowing out a match, his breath caught fire, with a crack like the report of a pistol, which was so loud as to awaken his wife. Dr. Scott Orr reports, in the same journal, under date of February 27th, a similar case occurring in a man seventy years of age. The patient had been troubled for two years with dyspeptic symptoms, and had eructations of gas which had such an offensive odor as to make him miserable when in anyone's company. One evening, while he was lighting his pipe, one of those involuntary eructations took place, and the gas became ignited, burning his mustache and lips, and frightening him greatly. The gas went off with a "puff," such as occurs when a match is applied to a pinch of gunpowder. The same thing has happened to the patient five or six times. Waldenburg, in 1864, published a case of dyspepsia, in which there were eructations of gas which was inflammable, and exploded with a bluish flame. In a paper by Schultze (*Berliner Klinische Wochenschrift*, 1874), it is stated that Professor Friedreich, of Heidelberg, had a patient who belched up inflammable gases.

The writer refers also to the case related by Ewald in his work on indigestion. The analysis of the expired gas was as follows: Carbonic acid, 20.57; hydrogen, 20.57; carburetted hydrogen, 10.75; oxygen, 6.72; nitrogen, 41.38; sulphuretted hydrogen, trace.

"The explanation as given by Drs. Beatson and Saunby is no doubt the correct one. The gas probably arises from the food remaining too long in the stomach, as in cases of dilatation, undergoing decomposition and generating gases such as carburetted hydrogen and free hydrogen, both of which are inflammable . . . Professor Müller (*Deutsche Medicinische Wochenschrift*), who has investigated the formation of gases, ascribes their generation in the stomach and intestines to the action of certain forms of bacteria upon the carbo-hydrates of the food.

"For the relief of this condition Ewald advises lavage of the stomach after Kussmaul's method. Heynsius says that chlorinated water gives more relief than anything else. Waldenburg obtained the best results from half-ounce doses of glycerine three times a day. Saunby suggests that these patients should take small quantities of solid food, without vegetables, every two or three hours."

THE ORGANIZATION OF QUACKERY.

A SHORT time ago we published a statement to the effect that a summons had been issued for a national convention of quacks. Whether such a convention has convened or not, it is quite true that the advertising quacks of this country are organized for mutual support to an extent that is not generally known. Perhaps the following letter, which we have recently received from a trustworthy physician practising in this city, will best show one phase of this matter. He writes:

"I have recently been treating a young man who is such an extraordinary illustration of the harm which quackery can do that his case may interest your readers. He is a strongly-built, robust-looking young fellow, a mechanic by trade. Up to the age of eighteen he had masturbated to a considerable extent, but had never observed any ill effects or known that the practice was harmful. He accidentally came across one of the pamphlets that are distributed through the city by a down-town quack. In all the evils possible to imagine from sexual excess were portrayed. The young fellow was frightened literally out of his wits. He went to this quack, who took all his money, and promised to cure him, but did not. After saving up more money he successively went to two other quacks, who treated him in the same way, with the same result. His main trouble now is a mental one, a hypochondriacal depression, of which I am trying to rid him; but a serious drawback has been his mail. Two or three times a week he gets letters, or circulars, or pamphlets from all kinds of quacks, quack agencies, instrument-makers, and patent medicine men. Each has some new method of curing his trouble, and some new way of hinting at the frightful consequences if not cured. He has thus been kept in a constant ferment. He tells me that he thinks his name has been put on a list, and I think it very likely the case."

Nothing in any phase of human life is more painful and revolting than such unblushing efforts to work upon the misery and misfortune of mankind. Medicine, when thus prostituted, is truly the vilest of all the trades devised by man; for it creates sickness, misery, and uncleanliness in order to fatten upon it.

The unfortunate feature of it nowadays is that it is being reduced to a system, has its organs, its institutes, and organizations for mutual benefit.

THE ALKALOIDS OF HYOSCYAMUS AND THEIR THERAPEUTICAL PROPERTIES.

THE most diverse reports have been made with regard both to the dosage and effects of the alkaloids of hyoscyamus. Judging from the contributions to English and American journals there are at least four different substances which have been used under the names of those alkaloids. These are the crystalline hyoscyamine, commercial amorphous hyoscyamine, Merck's amorphous hyoscyamine, and hyoscine.

According to statements made in a discussion on this subject at a recent meeting of the Neurological Society, the amorphous hyoscyamine of Merck is practically identical with hyoscine. Physicians should prescribe, therefore, the crystalline hyoscyamine when they desire the effect of this alkaloid, and the amorphous hyoscyamine, or hyoscine, when they desire that of the other; for it seems that the two drugs are not identical in their physiological or therapeutical properties, and that it is only the latter (*i.e.*, amorphous hyoscyamine, or hyoscine) which has pronounced hypnotic properties. With regard to hyoscine, Dr. J. Mitchell Bruce has recently reported his experience with it as a cerebral sedative (*The Practitioner*). The hydrobromate is the

salt used, since it is soluble in water. After referring to the researches of Professor Wood he reports ten cases of his own, which shows, he thinks, that hyoscine is a powerful cerebral sedative, relieving mania, delirium, and insomnia. The disadvantages of the drug are that its effects are temporary, and that it sometimes produces great shallowness and weakness of respiration, or even Cheyne-Stokes rhythm. Dr. Bruce has, however, heard of no fatal result from its use. He found the best working dose to be only gr. $\frac{1}{100}$ hypodermatically, or gr. $\frac{1}{100}$ by the mouth, which is less than the dose ordinarily used in this country. Hyoscine does not cause dryness of the throat, nor does it relieve night-sweats.

Dr. S. G. Webber, of Boston (*Boston Medical and Surgical Journal*) has been using hyoscine as a hypnotic with fair success; he gives it internally in doses of gr. $\frac{1}{100}$ to gr. $\frac{1}{60}$.

There seems to be little doubt that it is the amorphous hyoscyamine of Merck, or the hyoscine, which contains the sedative properties of hyoscyamus. It has not been satisfactorily ascertained which alkaloid possesses the more anti-spasmodic properties, though excellent results have been reported from their use in paralysis agitans, chorea, and other convulsive troubles.

WHO FIRST USED COCAINE IN CIRCUMCISION?

We have received several communications from various parts of the country, the writers of which dispute the claim made by Dr. Kingsley to priority in the use of cocaine as an anæsthetic in circumcision.

Dr. E. W. Smith, of Meriden, Conn., writes that the first of a series of circumcisions in which he used cocaine was performed on January 3, 1885. The patient, thirty-five years of age, presented himself for treatment for phymosis and venereal warts. Five or six injections of a four per cent. solution were made in the prepuce, and, with the patient for an assistant, the operation was performed in the usual manner. Dr. Smith makes no claim himself to priority, but thinks that Dr. Kingsley's claim should not pass unchallenged.

Dr. F. S. White, Assistant Physician to the North Texas Insane Asylum, Terrell, Tex., closes a note on this subject as follows: "Now, without any details, I wish to state that I performed circumcision under cocaine on Mr. S——, Decatur, Tex., on June 15, 1884. The usual indications were present, and the usual results were obtained, viz., complete union in six days."

Finally, Dr. Albert H. Cordier, of Windom, Kan., informs us that in December, 1884, he received from Dr. W. W. Murphy, at that time connected with the New York Eye and Ear Infirmary, a drachm of the four per cent. solution of the hydrochlorate of cocaine. On January 7, 1885, a man came to his office to be circumcised. He injected ten or fifteen drops of the solution in the prepuce, along the line of the proposed incision. At the expiration of a few minutes the operation was performed, the patient experiencing not the least pain, but acting as an amused and greatly interested assistant. This case was reported at the meeting of the Kansas State Medical Society, in May, 1885. "So far," writes Dr. Cordier, "my case is the first recorded one, coming to my knowledge, in the United States, and I believe my operation of circumcision under cocaine was the first one performed in America."

Dr. C. E. Bruce, of this city, reported, at some length, a case of circumcision under cocaine, in The Medical Record of October 31, 1885, and many other cases were reported about the same time in various journals in this country and abroad.

In the date given by Dr. White, June 15, 1884, there is evidently an error, and he probably meant to write 1885; for the letter of Dr. Noyes to The Medical Record, in which was announced the discovery of the local anæsthetic properties of cocaine, was written under date of September 19, 1884, and was published on October 11th, of the same year.

It would therefore seem that to Dr. E. W. Smith, although he does not claim it, belongs the credit of having first used the drug in this operation, although Dr. Cordier, having reported his case in May, 1885, is clearly entitled to the claim of priority in this application of cocaine, at least until some one brings evidence of having recorded an instance of its use at a still earlier date.

But, with all respect to our correspondents, we cannot see that a claim of priority in this matter is of any special value. Cocaine was used for minor operations on other tissues than those of the eye, almost immediately after the announcement of its discovery. No one would attribute much importance to a claim of priority in the use of ether in circumcision, when the anæsthetic had already been used hundreds of times in other operations, and the case of cocaine seems to be a parallel one.

THE PREVALENCE AND DISTRIBUTION OF SKIN DISEASES IN AMERICA.

The Statistical Committee of the American Dermatological Association is in the habit of issuing each year a report of the number and character of the skin diseases in several of the principal cities of this country. The tables furnished throw an interesting light upon the cutaneous aberrations of certain sections. Thus among nearly 15,000 cases of skin disease reported, New York furnished 5,692; Boston, 4,401; Chicago, 2,546; Philadelphia, 1,354; Baltimore, 673; and St. Louis none at all. A study of these figures will show that as the star of empire takes its westward way it twinkles upon a diminishing number of reported cases of skin disease; and it in particular shines upon Chicago, triumphant over St. Louis by twenty-five hundred to nothing.

The tables furnish some instructive information as to the comparative frequency of the different cutaneous disorders.

This is shown as follows:

Eczema, 4,370 cases, or over one-fourth of all; syphiloderma, 1,723; acne, 1,026; scabies, 724; tinea, 647; psoriasis, 535; pediculosis, 515; pruritus, 356; impetigo, 335; alopecia, 300; urticaria, 286; exanthemata, 197; dermatitis venenata, 166; verruca, 163; seborrhœa, 156; comedo, 145; herpes zoster, 141.

A study of the prevalent skin disorders indicates that there is here a wide field for preventive medicine. For example, there are over a thousand cases of parasitic affections, and nearly twice as many diseases of syphilitic origin, so that it is particularly apparent that a conti-

nent life and the free use of soap would most materially restrict the beneficent labors of the dermatologist. Skin diseases, however, appear to be increasing, despite the growth of sanitary science. We are particularly struck with the fact that Boston has presented, for two years, the largest number of cases of alopecia. This is directly in harmony with observations taken from another point of view, and confirms the opinion that Boston is still more than holding its own as the intellectual centre of the continent.

The significance of the large preponderance of cases of scabies in Boston is less apparent. Two-thirds of all the cases last year were credited to that city, and we can only hint that this increase has been coincident with the development of the mind-cure and the preliminary arrangements for the Harvard Centennial.

New York reports the largest number of almost all forms of disorders of the sweat apparatus, and also of disorders of a hyperæmic and exudative type; while to Philadelphia is given the distinction of reporting the only case of anidrosis.

RECEPTION TO PROFESSOR ASHHURST.

MR. WILLIAM H. S. WOOD, of New York, well known to the medical profession everywhere as the head of the publishing house of William Wood & Co., gave a reception, on Wednesday evening, December 15th, to Professor John Ashhurst, Jr. A large number of the leading medical men of the city were present, together with many eminent representatives of the profession from elsewhere, to pay their respects to the distinguished author and teacher.

The number of gentlemen who availed themselves of the invitation thus to meet Dr. Ashhurst must be very gratifying to our *confrère* from Philadelphia, evincing the high esteem which his erudition and surgical skill has won for him in the hearts of his professional brethren. It is not often that so many prominent medical men from widely distant localities are gathered together on such pleasant social occasions.

M. PASTEUR, who is exhausted by the incessant labors of the last few years, has left for Bordighera, where a villa has been placed at his disposal. He has stated that the subscriptions to the proposed Pasteur Institute now amount to nearly one million eight hundred thousand francs, and contributions still flow in, though more slowly. This sum was inadequate, not that the buildings will cost much, but that funds were required to fit up the laboratories, and to maintain a staff of medical assistants and attendants. At least eighty or a hundred thousand francs a year will have to be guaranteed, and he calculated that a sum of between three million and four million francs would have to be collected. M. Pasteur felt confident that this sum would be forthcoming.

NEW YORK POLYCLINIC.—Dr. R. C. M. Page has been elected to the Professorship of Diseases of the Chest and General Medicine in the Polyclinic. The appointment fills the chair made vacant by the resignation of Dr. Leaming, who, as Professor Emeritus, still remains as President of the Faculty.

News of the Week.

THE STATE BOARD OF CHARITIES held a special meeting on December 10th for the purpose of considering its annual report. This showed a slight increase in the pauper and reformatory classes, and a large increase in the number of insane, the various asylums of the State having 13,533 insane persons in their custody and care on October 1, 1886, as against 12,707 on October 1, 1885. The asylums for the insane throughout the State are generally crowded, and there is urgent need for further accommodation for this class.

FREIRE AND THE YELLOW FEVER INOCULATIONS.—To those who have jumped so eagerly to the support of Dr. Freire's claims as a yellow fever preventer, we commend a perusal of the following, written to *Science* by a correspondent in Brazil. He says: "Considerable interest has been manifested among medical men in the proposed American Commission to study Dr. Freire's yellow fever investigations and method of inoculation. The work of Dr. Freire seems to have awakened a more lively interest abroad than here. The official support that he received as President of the Board of Health, has been withdrawn since his retirement from that post, on account of his commendable, though perhaps not always judicious, efforts to suppress the powerful industry of manufactured wines, while the general attitude of the medical profession is that of extreme reserve. While he has a number of very fervent followers, a number of prominent physicians have vigorously combated his conclusions. As few, if any, of his critics are practised microscopists, he has been able to meet their scientific arguments quite successfully, but has been less fortunate in the defence of his statistics regarding the immunity of inoculated persons. Like all Brazilian statistics, these are too loosely drawn to inspire confidence. A large proportion of the inoculated has been among the shifting population, whose subsequent history can only be followed with difficulty; and Freire is accused of not admitting that the disease is yellow fever, in the case of the death of an inoculated person, no matter what the opinion of the attending physician may be."

DR. HENRY SLACK, of Fishkill, N. Y., died last week in his fifty-sixth year. He graduated at Albany Medical College in 1852.

THE SUCCESSOR OF THE LATE DR. JOHN P. GRAY.—The Board of Managers of the Utica Asylum have appointed Dr. G. Adler Blumer Superintendent, to succeed the late Dr. Gray. Dr. Blumer is an Englishman, but graduated in medicine seven years ago at the University of Pennsylvania. We trust that Dr. Blumer will now secure a competent pathologist for the Asylum, and that some scientific work of recognizable value will result. If we mistake not, no asylum in the country is so nicely equipped with laboratory facilities, or so abundantly supplied with funds for their use.

ALEXANDER KRAPOTKIN, a Russian biologist, physicist, and astronomer, who was banished to Siberia in 1874, has recently shot himself in Tomsk.

THE EPIDEMIC OF CHOLERA which has been prevalent in the north of Italy during this year has offered the occasion for a study of the disease, which has been made by Drs. Tizzoni and Cattani, of Bologna, the results of whose researches are contained in a recent number of the *Centralblatt für Med. Wissensch.* It is interesting to find that Koch's researches are confirmed and extended.

A MEDICAL ELECTION.—By a recent amendment of its medical laws, English practitioners have received the right to elect a certain number of direct representatives to the General Medical Councils—this council having previously been made up of representatives of the teaching bodies. Considerable excitement has attended the first election. The results, so far as known, give the election to Mr. Wheelhouse, Sir Walter Foster, and Dr. Glover for England, Dr. Bruce for Scotland, and Dr. Kidel for Ireland.

DRUMINE, A NEW AUSTRALIAN LOCAL ANÆSTHETIC, has been discovered and described by Dr. John Reid (*Australian Medical Gazette*, October, 1886). Drumine is the alkaloid from *Euphorbia Drummondii*, and is an almost tasteless substance soluble in chloroform and water, and producing local anæsthesia of mucous membranes in a way similar to cocaine.

A CASE OF ACTINOMYCOSIS IN A WOMAN is reported as observed at Springfield, Ill. The disease affected the jaw.

MERLATTI, THE FASTER, had, at last accounts, fasted for fifty days. He has been under strict surveillance, and has, it is said, taken only filtered water. He has lost twenty-two pounds of flesh. The daily excretion of urea has fallen to eight grammes. The heart beats sixty-six times per minute, and sphygmographic tracings show low arterial tension. There is a reduplication of the second sound.

AN ASSOCIATION OF GENERAL PRACTITIONERS has been formed in England to advance the interests, support the rights, and promote the welfare of the general practitioner; and especially, also, to obtain for him a voice in the management of his own affairs upon the various legislative councils of the profession. It must be inferred that the British Medical Association doesn't look after the general practitioner as it ought.

PALPATOMETRY AS A MEANS OF DIAGNOSIS.—A Russian physician, Dr. V. V. Filipopovitch, has recently published a pamphlet containing some observations on the advantage of ascertaining the degree of tenderness over particular areas by means of an instrument corresponding to Eulenberg's baræsthesiometer; it may be compared to a vertical spring letter-weight, the plate of which is replaced by an extremity having the desired form. The term used is "palpatometry;" the highest pressure, by variously shaped extremities, which could be borne without pain, was tested. This was found, by trial on a number of healthy subjects, to vary from fifteen hundred to two thousand grammes, when the instrument with the knob was used. The work of M. Peter is referred to, as also Dr. Burney Yeo's lectures on "Pain in the Region of the Heart and Palpitation" (which have been translated into Russian), and several diagrams and charts are given of heart and other diseases, where the mapping out of the surface, according to iso-æsthesic, or, rather, iso-analgesic, areas, indicates with great exactness the course of the disease, whether favorable or otherwise. The author has observed that, in typhoid fever, the spleen undergoes a marked and sudden increase of sensitiveness within the forty-eight hours immediately preceding defervescence. This was quite appreciable to ordinary manual palpation, and, during an epidemic of typhoid, he was able to predict pretty accurately the occurrence of defervescence. He points out the value of more exact means of estimating tenderness in affections where peritonitis is feared.—*British Medical Journal*

THE NOMENCLATURE OF NEW DRUGS.—The *British Medical Journal* has the following sensible comments upon this subject: "A tendency has recently become evident to name new drugs, especially those of chemical origin, rather in accordance with their supposed therapeutic effect than with their chemical constitution. The names antipyrin, antifebrin, and hypnone are examples of a practice which cannot but lead to much confusion. If a drug which lowers the temperature in fever is to be called antifever, then we shall have others known as pain-killers, or diarrhœa-producers. Further, a drug, originally introduced as a local anæsthetic—aconite, for example—may subsequently be applied to totally different uses. Such a practice, moreover, by stamping a drug with the mark of one description of physiological action, would tend to divert the attention from other and possibly not less important attributes. It would be going back to the *mistura tussis* or the *bolus purgans* of our ancestors."

THE PREDICTION THAT THE PNEUMATIC CABINET would soon be made use of by quacks, seems likely to be fulfilled. We have received a copy of a daily paper, published in a large city in Western Pennsylvania, in which an owner of the pneumatic cabinet devotes two columns to parading its virtues, and announces that he will soon publish a pamphlet in which the people can learn all of its beneficent capabilities.

COCAINE VS. CHLOROFORM IN WHOOPING COUGH.—In the *Journal of the American Medical Association* for October 9th, Dr. A. Y. P. Garnett, of Washington, says: "In order to procure it in a form sufficiently volatile to be readily vaporized, I selected chloroform as the solvent. A six per cent. solution of muriate of cocaine in chloroform was prepared, and ten minims poured in a wine-glass, made warm by tepid water, was placed under the patient's mouth, while the mother was instructed to keep the nostrils closed. . . . It was found by this means many of the paroxysms were arrested or materially cut short," etc. Dr. T. J. Tyner, of San Antonio, writes to the *Journal* of December 4th: "In reading the paper, the thought at once occurred to me that the relief was derived from the chloroform, the vapors of which passed off, leaving the cocaine. At my request Mr. James Kennedy, Ph.G., investigated the matter, and handed me the following as the result: 'Cocaine hydrochlorate does not volatilize at the temperature of the water-bath, nor does it rise with the vapor of its chloroformic solution. A six per cent. solution of cocaine in chloroform, evaporated to dryness on water-bath, yielded as a residue the entire quantity of the salt.'"

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, December 3, 1886.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. JAMES B. HUNTER read a paper (see p. 673) on

FEEDING AFTER SURGICAL OPERATIONS.

DR. R. F. WEIR said, with regard to the nausea and intense thirst after etherization, that he had resorted to all the measures mentioned by Dr. Hunter, and had to add to the list of remedies only one, which he had used with very satisfactory results during the last five or six years—namely, hot water, as hot as it can be swallowed, in small quantities; it will very often allay the thirst and nausea.

He had been impressed by the omission of two points—one doubtless non-intentional, and the other might be intentional. The first was the use of peptonized milk, which had given him good results, particularly when resorted to among the earlier articles employed. The second was the use, in patients in whom neither stomach nor the rectum would retain either food or stimulants, of hypodermic injections of stimulants. Dr. Weir did not believe that the injection, hypodermically, of twenty minims or more of whiskey, and repeated until the patient received two or three drachms, produced very much benefit. At all events, when the rectum would bear them, he preferred to give stimulants by rectal injection.

In cases in which all the means mentioned by Dr. Hunter had failed, and still the stomach remained irritable after an operation, he had been in the habit of using some preparation of opium to allay the irritability.

DR. A. B. BALL thought that it was extremely important to administer food, under the conditions named, and in similar cases, in very small quantities, even by the teaspoonful.

With regard to abstinence from food, he agreed with Dr. Hunter entirely, and believed that it could be abstained from for one or two days, or even longer, without any unpleasant effects in very many cases.

DR. E. G. LORING thought that the tendency had been to give too much food during the nausea following anæsthesia, and he was also very much in favor of giving what was administered in small quantities.

With regard to the use of opium, he had kept patients under its influence, with almost complete abstinence from food, for one or two days, with the most satisfactory results.

As to the administration of stimulants, he had been in the habit of giving them hot instead of cold, and he believed that this method was particularly beneficial.

DR. SHRADY believed that absolute rest for the stomach was the first to be considered in the treatment of nausea after operations. He fully indorsed the other recommendations of Dr. Hunter. In connection with the nourishment of patients, he referred to a novel practice which was first brought to his attention by Dr. J. M. Cleveland, the Medical Superintendent of the Hudson River State Asylum at Poughkeepsie. Dr. Cleveland had shown him several insane patients upon whom had been tried, with good results, an hypodermitic injection of cod-liver oil, to the amount of an ounce at a time.

METHOD OF ADMINISTERING ETHER TO AVOID ITS PROFOUNDLY DEPRESSING EFFECTS.

DR. SEXTON remarked that it had seemed to him the depressing effects of ether might be avoided by beginning anæsthetization with nitrous oxide.

DR. HUNTER thought the only advantage in that method was that it was more agreeable to the patient. According to his experience, the depressing effect was not modified, and the nausea following had not been diminished.

DR. SEXTON had given the nitrous oxide for the purpose of obtaining its stimulating effect, which would increase the safety of the administration of ether.

DR. WEIR could corroborate Dr. Hunter's statement with reference to the after-effects of ether when preceded by nitrous oxide.

DR. SHRADY believed that ether produced its best effects when inhaled gradually at the beginning of anæsthetization, and he thought that the patients vomited less frequently afterward when it was given in this way.

DR. LORING had operated once while the patient was under the influence of nitrous oxide, and he was so much alarmed concerning the cyanosis that he had not tried it since.

DR. SEXTON said that he had been obliged to discontinue the use of nitrous oxide in operations on the ear, because the least motion on the part of the patient made their performance exceedingly difficult. He thought that no fear need be entertained with regard to its producing injurious effects on the general system.

DR. LORING had been best pleased with the administration of ether from an open sponge, without cone or towel, given slowly and with plenty of air.

DR. WEIR'S method was to give an hypodermic injection of morphia with a small quantity of atropia, and then to have the patient take a dozen or so full, deep inspirations just before beginning with the ether. When used in this way the ether could be removed earlier, and a less quantity was required. He thought, however, that the method did not diminish the vomiting.

The PRESIDENT thought that it rather increased it.

DR. SPENCER, present by invitation, remarked that the occurrence of nausea had been diminished by the use of Clover's inhaler at the Woman's Hospital, and that the patients could be anæsthetized quicker and came out of the anæsthesia more promptly than when the ether had been given by other methods. The rule was to give as little food as possible and only in small quantities after etherizing a patient, and, as a rule, vomiting did not occur. If it did occur, not much effect was produced by whatever was given to control it. One of the surgeons relied upon the administration of drugs and food by the rectum after operations, and he did not have so much annoyance from flatulence as when these substances were given by the mouth.

DR. HUNTER, in closing the discussion, said that he had intended to mention peptonized milk as one of the articles of food to be used.

He thought that it was a very bad method to administer ether *gradually*, as the struggles of the patient were liable to be increased, and as much ether was consumed in quieting these as frequently was required for the entire operation when given rapidly. He regarded the administration of morphine at the same time as dangerous. He had seen one case in which, after the administration of an hypodermic injection according to the routine method, after an operation, the patient passed into fatal coma.

DR. SHRADY said that he was very sorry to hear Dr. Hunter make the remark he had concerning the gradual administration of ether, for his experience had been entirely opposed to the method of overwhelming the patient at once with the anæsthetic.

DR. HUNTER said that for several years he did not give ether without considerable air, as he used the Allis inhaler. But recently he had been using Clover's inhaler with more satisfactory results, and it admitted scarcely any air.

DR. C. L. DANA then opened the discussion on

THE THERAPEUTIC EFFECTS OF STROPHANTHUS.

Strophanthus hispidus is a plant found in Central Africa, where it is employed by the natives as an arrow-poison. Its chemical character and pharmacological ac-

tion have been studied by Professor Thomas R. Fraser, of Edinburgh, who reported his first results in 1869, again in 1872 and 1885. Several French observers have also made contributions to its chemistry. Professor Fraser, however, has the credit (*British Medical Journal*, November 14, 1885) of showing that strophanthus has a pretty definite therapeutical action. He found strophanthus to be a powerful stimulant to the heart-muscle, slowing its beat and increasing the strength of its systole. In poisonous doses it stopped the frog's heart in systole, and caused early cadaveric rigidity. It does not seem to have much effect upon the blood-vessels.

It differs from digitalis, then, in stimulating the heart-action without acting on the blood-vessels. It reduces the pulse, slightly lowers the temperature, increases the flow of urine; is not hæmostatic, is not cumulative, and rarely causes gastro-intestinal troubles. Its active principle is a glucoside, strophanthin. This exists in large amount in all parts of the plant—six to eight per cent. It represents all the therapeutic properties of the plant.

Professor Fraser reports six cases of cardiac disease, all mitral lesions, double or single, in which the drug was signally useful.

Dr. Dana had used strophanthus in five cases, as follows:

CASE I.—Male, forty-seven years of age. Symptoms: Anasarca, dyspnœa, slight pulmonary œdema, double mitral and direct aortic murmurs, action irregular and tumultuous. Diagnosis: Valvular disease of heart, double mitral murmur, and aortic stenosis. Treatment: June 21st to July 20th, under infus. digital., acet. pot., glonoin; daily amount of urine, 36 to 58 ounces, average 45 ounces. July 21st and 22d, added fl. ext. scoparius; urine, 62 to 68 ounces. July 23d and 24th, gave only scoparius; urine, 60 ounces. July 24th to 27th, added apocyn. cannabin.; urine, 60 to 47 ounces. There was no material change up to July 27th. July 27th, tr. strophanthus, three minims, t.i.d., till August 5th; urine, 96 ounces, gradually falling to 40 ounces, average 60 ounces. Three days after strophanthus begun, the œdema was nearly gone, patient more comfortable, dyspnœa less. August 5th to 12th, strophanthus stopped, and glonoin, digitalis, potas. resumed; urine, 48 to 36 ounces, average 40 ounces. August 12th, strophanthus, four minims, t.i.d., increased to eight minims, t.i.d., continued till August 24th; urine, 30 to 20 ounces, finally to 40 ounces. August 16th, under seven minims, t.i.d., patient has little œdema, and is quite comfortable, appetite good. August 25th to 29th, scoparius, digital., glonoin; urine, 32 to 24 ounces. August 30th to September 1st, apocynum. can.; urine, 30 ounces. Some improvement. September 1st to 3d, potas. iodide; urine, 48 to 96 ounces. Patient died while straining at stool.

Remarks.—Tr. strophanthus relieved the œdema and dyspnœa, and improved the general condition for a time, after four other drugs had been tried and failed, but patient finally died. It was a bad case. The urine was not especially affected by the drug.

CASE II.—Louis V——, fifty-six years of age. Symptoms: Anasarca, dyspnœa, palpitations, præcordial pain, cyanotic, hydrothorax. Diagnosis: Mitral insufficiency and dilatation, no Bright's. Treatment: July 10th to 15th, digital., pot. acetat., apocynum; urine, 26 to 50 ounces, average 54 ounces; pulse, 88; respiration, 23. July 15th to August 8th, strophanthus, three minims, t.i.d.; urine, 72 to 104 ounces, average 60 ounces. July 31st, great improvement. August 31st, discharged cured.

Remarks.—Tr. strophanthus caused great improvement; pulse lowered, with increased œdema gone.

CASE III.—Louis P——, sixteen years of age. Symptoms: Intense anæmia, dyspnœa, slight general anasarca, heart-action very tumultuous; pulse, 105; respiration, 66; urine, twenty-five per cent. albumen, hyaline casts. Diagnosis: Bright's disease, anæmia, weak heart, but no organic disease. Treatment: August 16th to 23d, glonoin, apocyn., digit., and strophanthus, venesection; urine, 30 to 184 to 92 ounces. August 23d to 28th, strophan. stopped; urine, 150 ounces. August 28th to September 15th, no diuretics; urine, 40 ounces. Better. September 15th, strophanthus, three minims, t.i.d.; urine rose from 40 to 52 to 76, 70 to 66 to 68 ounces. Improving.

Remarks.—In this case strophanthus was used to steady the heart and test the diuretic action of the drug. It did have some diuretic action. The improved condition of the heart cannot be referred to the strophanthus alone.

CASE IV.—Anna S——, fifty-nine years of age. Symptoms: Stupid, cyanotic, œdema of legs; urine, forty-three per cent. albumen. Diagnosis: Bright's disease. Treatment: August 11th to 22d, inf. scoparius, nitroglycerin, strophanthus; urine, 34 to 60 to 37 to 62 to 43 ounces. No improvement.

Remarks.—The drug did no good. It was given mainly to test its diuretic power. The case was a bad one.

CASE V.—Martha E. S——, fifty years of age. Symptoms: Anasarca, dyspnœa; respiration, 32; pulse, 90. Diagnosis: Mitral regurgitant. Treatment: August 15th to 21st, strophanthus, three minims, t.i.d.; urine, 30 to 28 to 27 ounces. Improved; heart more regular. August 21st to 28th, added glonoin; urine, 22 to 27 ounces. Improved.

Remarks.—Under the strophanthus the patient improved, but not in any striking way.

Concluding note.—In the two cases of Bright's with accompanying cardiac irregularity and weakness no benefit, or no striking benefit, was observed. In the three cardiac cases progressive improvement occurred while the drug was being administered. In two cases marked improvement occurred after the strophanthus was administered, while previously no special improvement was observed, three cardiac tonics having been previously tried in one case, two in the other.

DR. E. G. LORING regarded the discovery of the elective action of drugs as one of the most beautiful advancements of modern physiology and therapeutics. Atropia dilates the pupil, eserine does exactly the opposite, and the effect of both these drugs is upon one muscle only. It may be that strophanthus affects the cardiac muscle and has no other action. He had been able to produce dilatation of the pupil with $\frac{1}{1000000}$ of a grain of atropia.

DR. A. A. SMITH said that strophanthus had been used in his wards in Bellevue Hospital in several cases. In two cases of pulmonary œdema it was administered with astonishing results. The first was a case of mitral systolic and double aortic lesion, and pulmonary œdema developed after unusual exertion. Five minims of the tincture were given every fourth hour, and the patient recovered. True, the patient was dry-cupped, but Dr. Smith had but little faith in this as a means of affording relief in these cases, and the patient was also kept in the semi-recumbent position. He doubted the existence of an elective action in strophanthus.

The second was a case of pulmonary œdema occurring with pneumonia, and the drug, in two doses of four minims each, given hypodermically at an interval of two hours, permanently relieved the patient.

It had also been used in emphysema with good effect, and in one case of heart-stroke, without much elevation of temperature, but pale surface and feeble heart, with most excellent results.

DR. BEVERLEY ROBINSON presented a patient; also the histories of several cases that had been treated in St. Luke's Hospital by the administration of strophanthus. The notes had been furnished him by the house physician, Dr. Geo. K. Swinburne.

CASE I. "*Irritable heart*" (*weak heart*); *cardiac dilatation; dyspepsia.*—H. W——, fifty-four years of age, native of Ireland, and family history negative, was admitted August 14, 1886. In 1864 he had an attack of "palpitation of the heart and dyspepsia," while a soldier,

which was accompanied by marked dyspnœa, headache, and severe pain in both shoulders, but particularly the left. He had a similar attack seven or eight years ago, and another four years ago. During the last six months has occasionally had pain in the epigastric region, with marked palpitation and dyspnœa. Three weeks before admission these symptoms were developed by errors in diet. When he entered the hospital he was cyanotic, his tongue was coated, appetite poor, pulse feeble, 108; respiration, 24; temperature, 98.6° F. Urine, 1.018, acid, and contained neither albumen nor sugar, but amorphous urates. No true apex-beat of the heart could be felt, but below the fifth intercostal space, inside of the mammary line, was a distinct pulsation synchronous with cardiac systole. There was a rasping murmur with the first sound, transmitted downward over the pulsating area, upward over the aortic area and into the neck, and to the left into the axillæ. The liver and spleen were enlarged, and there was moderate bronchitis. From August 15th to 31st the patient took digitalis and caffein, and the quantity of urine passed daily varied from 38 to 160 ounces, the last amount being obtained the third day after admission. August 31st it was 42 ounces. From September 1st to 28th he took convallaria, and the quantity of urine fluctuated between 66 and 32 ounces. From September 29th to October 2d he took digitalis again, and the quantity of urine varied from 20 to 32 ounces. From October 3d to November 4th he took *strophanthus*, five minims, t.i.d., and the quantity of urine passed varied from 30 to 79 ounces; average, 43. From November 5th to December 2d the patient was treated by *lavage*, with special reference to his dyspepsia, having previously received ingluvin and other stomachic remedies. The quantity of urine passed ranged between 32 and 68 ounces; average, 43. The patient's *pulse*, from August 15th to 31st, ranged from 84 to 150, 188 to 204. From August 31st to September 9th the pulse was moderately slow and regular (under convallaria). From September 9th to October 2d the pulse ranged from 90 to 222, being above 150 considerable of the time. At times its rapidity was reduced by the use of galvanism and the application of the cautery to the præcordial region. From October 3d to November 3d pulsation could be felt over præcordial region. Pulse ranged from 102 to 78, 72, 108 to 192. From November 5th to 30th it ranged between 96 and 108 (under *lavage*).

Case II. *Mitral regurgitation; hypertrophy and dilatation; chronic diffuse nephritis.*—Z. S. W——, male, forty years of age, English, and a tobacconist, was admitted August 25, 1886. Notes by Dr. Swinburne. Dr. Dench, house physician. Both parents died of dropsy. Patient has drank alcoholics to excess; has had gonorrhœa, pleurisy, typhoid fever, and rheumatism, and has suffered more or less from dyspnœa and palpitation. A few months ago his feet and ankles began to swell and he began to lose flesh. On admission his urine contained albumen and granular casts. There was a loud systolic murmur over the apex and over the præcordia, with evidence of enlargement of the heart. There was enlargement of the liver and spleen.

This patient received digitalis, convallaria, and caffein, with more or less temporary benefit. On October 1st he passed only 5 ounces of urine, and strophanthus was prescribed, five drops, t.i.d., and within twenty-four hours the quantity was increased to 53 ounces. Pulse weak, irregular, 108. During the next twenty-four hours he passed 72 ounces of urine. Pulse 108, and dicrotic. Patient improved and was up on October 28th. On October 30th thoracentesis was performed, but only fourteen ounces of fluid were withdrawn. From this date forward the patient took caffein, glonoin, acetate of potash, etc., and died November 20th.

While the patient was taking digitalis and acetate of potash the quantity of urine passed in twenty-four hours varied from 42 to 52 ounces; when taking convallaria the quantity ranged between 52 and 36 ounces; and while strophanthus was administered the quantity varied from 72 to 32.

Case III. *Mitral regurgitation and cardiac dilatation.*—John H. B——, forty years of age, United States, was admitted October 6, 1886. Chronic alcoholism; pulse 144, very weak. Injection of strophanthus added strength to the pulse and lessened its frequency. Urine contained casts and albumen.

From October 8th to 18th the patient took strophanthus, and the daily quantity of urine varied from 26 to 32 ounces. The quantity remained substantially the same while taking convallaria, caffein, digitalis, etc.

Case IV. *Chronic myocarditis; mitral stenosis.*—H. W. L——, male, thirty-one years of age, was admitted November 5, 1886. Father died of heart disease. Patient has never had rheumatism; uses alcohol freely, has suffered from dyspeptic symptoms, dizziness, dyspnœa, and pain in præcordia. Heart feeble, and radial pulse irregular and scarcely perceptible. Apex-beat in the fifth intercostal space and four inches from the median line. Lungs emphysematous; systolic murmur over apex.

While taking strophanthus the daily quantity of urine varied from 94 to 64 ounces; and while taking digitalis it ranged from 42 to 86 ounces.

Case V. *Mitral and double aortic regurgitation.*—T. N——, male, thirty-six years of age, was admitted November 5, 1886. Patient had rheumatism ten years ago, and diphtheria six years ago. His father had rheumatism.

While taking strophanthus the daily quantity of urine varied from 40 to 28 ounces; and under digitalis from 32 to 54 ounces.

Other cases to the number of *twelve* were added, and included one of weak heart after pneumonia, one of athletic heart possibly (?), one of excessive frequency of cardiac action, one of mitral regurgitation without dropsy or effusion into cavities, one of mitral regurgitation and œdema of hands and legs, and two others of mitral and aortic disease combined.

The results obtained in all these cases, it was believed, supported the belief that even in the same case the mere change from one cardiac tonic to another will increase the quantity of urine for a day or two, or more; and that, although the previous one had appeared to have some remarkable degree of efficiency. The most important fact to know in any given case was the symptoms which pointed to the stage of the disease.

Dr. Robinson further remarked that he regarded the case of Williamson (the first), who was presented, as a very good illustration of what Da Costa described several years ago as a weak or irritable heart. Then the question arises, Is a weak, irritable heart due to deficiency of muscular power, or has the pneumogastric nerve lost its proper physiological action? He regarded the present case as one in which the nerve had lost its proper physiological action, and he also believed that it was not known to what extent digitalis affected the nerves that control the heart. Inasmuch as in this particular instance strophanthus had affected the heart favorably, t remained to be considered whether the good effect was due to its action upon the cardiac muscle or upon the pneumogastric nerve, and he believed that it was due to the tonic influence of the drug upon the latter.

Dr. A. B. Ball remarked that cases of extreme rapidity of the pulse were very apt to be due to defective nerve-supply of the heart. He did not believe that a cardiac muscle which was enlarged to carry out a certain degree of compensation was ever a truly strong heart; it was always more or less weakened in its muscular tissue.

Dr. C. L. Dana remarked that the man presented by Dr. Robinson was about the age of the patients in whom Semmola diagnosticated what he called bulbar ataxy, due to degeneration of the nuclei in the bulb that supplies the nerve-force for the heart. The peculiar blueness of the ends of the fingers on both hands, at times with slight

œdema of the legs, he regarded as almost pathognomonic.

He further said that he wished to speak of strophanthus simply as a drug that would probably meet indications which were not met by other cardiac tonics, and that only in certain cases it would be beneficial.

The Society then went into executive session.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 10, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DOUBLE OVARIAN FIBROID.

DR. H. MARION SIMS presented a specimen, removed from a patient aged forty-eight, the mother of two children, the youngest being sixteen years old. She had always enjoyed excellent health up to five years ago, when she began to have severe pains in the right side of the abdomen, dragging pain in the back, with violent bearing down, and inability to either stand or walk without suffering. The severity of the pains increased to such an extent that she consulted a physician, who put her on a general tonic plan of treatment, which was continued for two or three years without special improvement. Two years ago she noticed a lump of considerable size in the right side of the abdomen, which grew steadily, though slowly, and the pain increased in severity until finally the patient was bedridden, and in that condition she was brought to Dr. Sims last June. She had change of life four years ago. The tumor occupied the right side of the pelvic cavity, pressed the uterus firmly against the sacrum, and extended half-way across the abdomen. It was readily removed, there were but few adhesions, and the patient made a rapid recovery, without the development of an unfavorable symptom. She was discharged cured at the end of four weeks, and had remained very well. The operation was performed more for the relief of the reflex symptoms than for the mere removal of the tumor.

DR. J. S. THATCHER presented

A HEART THAT HAD TWO ANEURISMS,

both communicating with the left ventricle at the apex, and both apparently being between the two layers of the pericardial sac, the pericardium having been previously adherent, and the cavities having been formed by the pressure of the blood from the ventricle. The two openings between the ventricle and the aneurismal sacs were about the size of an ordinary match, and their edges were smooth and made up entirely of fibrous tissue. They had evidently existed for a considerable time before death. The muscular tissue around the holes was very much thinned, and in their immediate neighborhood had disappeared entirely. The largest aneurismal cavity was nearly filled with laminated fibrin; the smallest contained fluid blood. The largest sac was about the size of two fists, the smallest of one fist. The patient was a woman fifty years of age, who gave the history of eight abortions, without other evidence of syphilis, and the history of an attack of rheumatism two years before death. About one week before death she had a severe pain in her left leg, and was unable to use the limb. Otherwise she had been able to be about, and had been fairly comfortable. She died, apparently of heart failure, and death was not sudden.

The coronary arteries exhibited only slight change. There was marked atheroma at the beginning of the aorta, and probably atheroma of the finer branches of the coronary arteries.

DR. L. EMMETT HOLT presented the specimens from a case of

SINGLE KIDNEY.

They were taken from the body of a male child, aged ten months, who died of dysentery at the New York Infant Asylum. The symptoms were acute, and the temperature high; during life the urine contained a small amount of albumen, but no casts were found. No malformation existed in the bladder, testicles, nor anywhere in the body, except in the kidneys. The right was much enlarged, weight one ounce and six drachms. It extended from the eleventh rib to the promontory of the sacrum. It was lighter than normal in color, and on section showed to the naked eye quite indistinct markings. The left kidney was represented by a body about the size of a pigeon's egg, which was composed of one larger cyst and four or five smaller ones, held together by loose areolar tissue. These contained a thin, watery fluid. The suprarenal capsule was as large as upon the right side and surmounted this rudimentary kidney. The left renal artery was present, but was only about one-sixth the calibre of that going to the right side. The left ureter opened normally into the bladder, and was pervious from the bladder to a point an inch and a half from the kidney. From thence it could not be isolated. It was of very small size, barely admitting a fine probe. The right ureter was about twice the normal size.

DR. O. H. ROGERS presented a specimen of

CONGENITAL MULTIPLE CYST, OCCUPYING THE POSITION OF THE LEFT KIDNEY.

It was a dissecting-room specimen, and was found in the body of a child that died within three or four days after its birth. The right kidney was normal.

DR. PRUDDEN referred to the fact that in all the cases in which he had presented the specimens, the left kidney was absent.

The Society then went into executive session.

Stated Meeting, November 24, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. W. M. CARPENTER presented, in behalf of a candidate, a specimen of *Epulis*, which was referred to the Committee on Microscopy.

DR. R. VAN SANTVOORD presented microscopic slides which showed several

MILIARY ANEURISMS

removed from the brain of a man in which there were six or seven cortical hemorrhages. The ordinary process of macerating the brain was carried on for a time, and then, instead of washing it away with a stream of running water, he took hold of both carotids and pulled out the leash of vessels quickly, when, on washing the leash in a bowl he found that six diseased branches had been obtained.

CARDIAC THROMBI — CALCIFICATION OF THE AORTIC VALVES—WEAKENED LEFT VENTRICLE AND PULMONARY ŒDEMA.

Dr. Van Santvoord also presented a heart taken from the body of a woman who said that she was fifty-five years of age, although she was apparently much older. She was in the hospital two weeks before death. Her predominant symptom was great feebleness of cardiac action.

On autopsy there were found the lesions of pulmonary phthisis in both lungs—most extensive in the left, in which there was a cavity at the apex. The brain was œdematous. The liver was fatty and the kidneys showed somewhat advanced chronic diffuse nephritis. The spleen contained a small nodule, probably tubercular, although it looked somewhat like a gummatous growth. The left ventricle was slightly hypertrophied and dilated, and it contained a number of cardiac thrombi, firm and nearly white. The aortic valves were the seat of advanced calcification; the aorta and the coronary arteries were only

lightly atheromatous. The right side of the heart was pparently normal. The cardiac muscle was fatty. There ras œdema of the lungs.

Dr. Van Santvoord regarded the case as one that exmplified the cause of pulmonary œdema demonstrated xperimentally by Dr. W. H. Welch, namely, when narked weakness of the left ventricle is present œdema f the lungs occurs very frequently.

Dr. Van Santvoord further presented a specimen that llustrated

AORTIC REGURGITATION (FROM RUPTURE OF A VALVE?)—PERICARDITIS.

A. G.——, aged forty-four years, had been an inmate of he Randall's Island Insane Asylum for nine years. His ccupation had been that of a driver of a brewery wagon. Ie had been working on the farm prior to his admission o the hospital. Beyond these facts nothing was known f his previous history. He was found to be suffering om an acute nephritis which ultimately became compliated by acute pericarditis, which proved fatal. A typical louble aortic murmur was heard over his heart. There ras also heard a systolic murmur of the apex not transnitted to the left. A cardiac friction murmur was heard our days before death.

The autopsy showed slight thickening of the cerebral rachnoid and anæmia of the brain. The lungs were ery œdematous. A small amount of effusion was found n each pleura. The liver showed a moderate amount of rregularly distributed cirrhotic change, central congestion f lobules and fatty degeneration. The spleen was about louble its normal size and firm. The kidneys were norıal in size, œdematous and the cortex was mottled yelow. The mucosa of the stomach was thickened and cchymotic. The intestines showed marked venous inection. The mucosa was thickened in the duodenum nd the large intestine. The pericardium contained two unces of clear fluid. Both layers of the pericardium ere coated with yellow lymph. The right cavities were pparently normal. The left ventricle was considerably ilated and hypertrophied. Two leaflets of the aortic alve were only slightly thickened, the third, correponding to the right coronary artery, showed a notch t one side of the corpus arantii. From one side of is notch projected three short fibrous vegetations, om the other one about one inch long. The mitral rifice admitted the ends of three fingers. The valves ooked normal. The muscular substance was pale, but ot apparently degenerated. The coronary arteries were ı good condition. The aorta showed extensive atheoma, calcareous plaques existing low down. It was ot dilated. The right radial was apparently normal.

From the fact that two of the leaflets were only lightly thickened from the notch-shaped lesion, and mitation of the fibrinous outgrowths to the edges of is notch, it seems probable that the lesion was caused y a rupture of the valve.

Another feature of interest in the case was the marked isproportion between the valvular changes and those in ıe aorta. The causal connection between laborious ccupations and atheromatous changes in the aorta and ortic valves is well recognized. The occupation of this atient, viz., that of driver of a beer wagon, was one inolving considerable strain, such as might have been sufcient to cause atheroma. What other factors may have een at work in the absence of history can only be onjectured.

Compensation of the cardiac lesion was apparently ood prior to his last illness. It seems plausible to supose that the extra strain thrown on the aorta by the cariac systole, which was necessary to maintain this comensation, was a factor of importance in increasing the heroma of the aorta. The valves, however, being subcted to a subnormal strain on account of the regurgitaon did not share in this factor, and so the unusual disroportion between the general disease of the valves and the aorta may be supposed to have arisen. The broad top of the sphygmographic tracing, taken when the patient was still in good general condition, showed a long and strong ventricular systole. Its rapid falling off and the comparatively slight development of the systolic impulse show the combined efforts of the atheroma of the aorta and the regurgitation.

As the auriculo-ventricular orifice was dilated the systolic murmur at the apex may have been due to relative incompetence of the mitral valve.

DR. H. J. BOLDT presented

A SLOUGH FROM THE UTERUS,

the result of packing the uterine cavity with chloride-of-zinc cotton after curetting in a case of carcinoma. It came away at the end of ten days, and was interesting chiefly on account of its great thickness.

BILIARY COLIC—ACUTE GASTRO-ENTERITIS—ULCERATION OF THE GALL-BLADDER.

DR. L. EMMETT HOLT presented several medium-sized, gall-stones which were interesting chiefly in connection with the clinical history of the case. They were removed from the body of a man, forty-five years of age, tall, and weighing two hundred pounds, who died last July. There was a history of attacks of biliary colic with jaundice. On the 8th of July he was taken with extreme pain in the region of the stomach and right hypochondrium, apparently due to indiscretion in diet. On the next day he was jaundiced, and had the symptoms of acute gastro-enteritis. The attack subsided, so that at the end of three or four days he was quite comfortable and remained so for ten days, when he had another attack, though less severe than the other, and from that time he began to lose flesh and strength and to have more or less fever. One day he had a violent chill and his temperature rose to 104° F. There was a history of previous malarial poisoning, sustained by the presence of an immensely enlarged spleen, and quinine was given in full doses. The temperature fell, but on the third day after the chill it again rose, and from that time until the death of the patient, it remained more or less elevated, but without chills.

At the autopsy, the heart was found to be slightly fatty, the liver intensely jaundiced and slightly fatty, and the kidneys the seat of recent parenchymatous nephritis. The other organs were apparently normal except the stomach and the duodenum with two or three feet of the jejunum, all of which showed the evidences of acute inflammation to a marked degree. The hepatic and the common bile-ducts were pervious. The jaundice was due, apparently, to the obstruction caused by the swollen condition of the mucous membrane of the duodenum about the orifice of the common duct. The gall-stones had ulcerated through the gall-bladder, a localized peritonitis had taken place, and the calculi had become encysted in an abscess that had formed upon the under surface of the liver in close proximity to the gall-bladder. Death was evidently caused by blood-poisoning from this abscess.

The symptomatology of the case rendered it exceedingly obscure.

DR. VAN SANTVOORD recalled a case, in Bellevue Hospital, which began very much as did Dr. Holt's, but terminated in the formation of an abscess that pointed externally and was opened along the line of the rectus muscle. The autopsy revealed several old sinuses leading into the cæcum, the small intestine, etc. Death resulted from repeated secondary hemorrhages following division of an abnormally distributed artery in an operation performed for the purpose of healing the sinuses.

PERIOSTITIS—OSTEO-MYELITIS—EXSECTION OF TIBIA.

DR. WYETH presented the whole of a tibia between the epiphyses, removed by operation from a boy twelve years of age, a patient in Mt. Sinai Hospital. On admission there was the history of chills and high temperature, and there was great tenderness on pressure over

the bone. A free incision was made three inches below the upper epiphysis and another just above the ankle-joint. These openings gave vent to a considerable quantity of pus, but the temperature was not materially reduced. The patient was next etherized, the bone exposed and trephined and found to be full of pus. The opening was enlarged, the cavity scraped, a drainage-tube inserted, and the case treated by the open method. The patient did very well after this operation; his temperature fell to 100° to 101½° F., and his general condition improved so much that five weeks afterward, five weeks and three days after the first incisions, Dr. Wyeth exsected the tibia completely from the upper to the lower epiphysis. The operation was done by the bloodless method; no arteries were tied; and hemorrhage, after the Esmarch bandage was removed, was controlled by compression. The periosteum was saved and it was hoped that there would be reproduction of the bone.

This was the last of nine cases of destructive osteitis of the tibia in which he had operated within the last fourteen months. In eight cases the results had been satisfactory, although the patients were in a bad general condition when operated upon. From two to four inches of the tibia were removed in three cases, and all the patients had recovered with reproduction of bone except one, in which it was destroyed by osteitis, and the patient returned three or four weeks ago with the fibula in the normal condition and nearly normal position, but with the tibia absent to the extent of about four inches. He was admitted to the hospital and Dr. Wyeth had made an effort to convert the fibula and the tibia into a single bone by removing the articular surfaces at the tibio-fibular joint with a thin layer of bone, and then drilling the two bones together with the hope of getting bony union, which can be supported by mechanical apparatus and thus enable the patient to walk. It might be necessary to perform a similar operation at the other articulation.

The point to which he wished to direct special attention, in connection with these cases, was that there was scarcely a condition of osteitis of the tibia which justified amputation. If, as soon as periostitis was recognized, operative procedure was resorted to, there was but little chance that the deeper disease would develop. When the more extensive operation was required good results might reasonably be expected so long as a thin layer of cartilage was left, although tne presence of as much of the epiphysis as possible was desirable. He had not seen a case of arthritis or osteo-arthritis as the result of the operation.

Dr. Wyeth also presented two small specimens, one a lipoma and the other a small cystic tumor removed from the forehead, in order that he might have opportunity to speak of the use of

COCAINE IN MINOR SURGERY.

He had performed several such operations, and in not a single case did the patient suffer pain, nor had he seen any unpleasant symptoms. For producing the local anæsthesia he had used a four-per-cent. solution with an ordinary hypodermic syringe, injecting the fluid under the skin in the line of the incision across the tumor and around its periphery. He had performed ten or fifteen *circumcisions*, with great satisfaction by this method, and also had operated for ingrowing toe-nails without pain to the patient, as well as for hæmorrhoids, fistula in ano, etc.

As to the quantity that can be used with safety, he was unable to say positively. He had injected as much as three or four grains at a single operation. But the drug should be used with greater care within the domain of the fifth nerve than elsewhere. When the Esmarch bandage was used, he injected the solution into the bloodless tissues with less care concerning the quantity, because he always milked the solution out by squeezing the parts, and then washed the surface, and also, in addition, loosened the bandage and allowed bleeding to go on freely for a short time. The bandage was then tightened and the dressing completed, and he had not seen any unfavorable symptoms follow the use of quite large quantities of the drug.

Dr. Geo. F. Shrady referred to a case of acute necrosis of the humerus in which, some years ago, he exsected the entire shaft of the bone, placed the limb upon a single inclined plane and attached a weight, and there was reproduction of the bone for its entire length. At that time it was the longest bone on record that had been reproduced. The time required was about three months.

Dr. V. P. Gibney thought it very difficult to always determine just where periostitis ceased and osteo-myelitis began. Mr. Macnamara, of London, had expressed the opinion that the line could not be very easily drawn between these two diseases in all cases.

The operation performed by Dr. Wyeth, to make a single bone in the leg, was similar to one performed by Dr. W. T. Bull, the final result of which was that the girl had been able to dispense with all mechanical assistance in walking, except a high shoe. The upper and the lower fourths of the tibia remained as the result of bone disease from which she suffered when a child, and they were supported by the fibula. There was marked bow-leg. Dr. Bull divided the fibula obliquely opposite the terminal parts of the tibia, then divided the tibia obliquely, and fastened the one to the other with wire. The wound healed kindly, and the patient had a straight limb.

Dr. Schiff referred to a case in which no bone-formation had taken place, and the question of transplantation of bone was under consideration.

Dr. Boldt said that great care should be exercised with regard to the use of cocaine in the region of the tri-facial nerve, as he had seen less than one grain produce serious shock in the human subject. Judging from experiments made on dogs, he would say that one-tenth of a grain to one pound of weight was the maximum quantity to be administered to the human subject.

Dr. Liell referred to two cases in which Dr. Sims had removed, without pain, two vaginal cysts, by the aid of cocaine.

Dr. Van Santvoord asked Dr. Wyeth if he had dilated the anal sphincter without pain, under cocaine.

Dr. Wyeth said that he had not, although he had divided it repeatedly with perfect insensibility to the knife.

Dr. Lockwood alluded to a case in which cocaine-poisoning was produced by the injection into the neck of twenty minims of a four-per-cent solution preparatory to tracheotomy.

Dr. Wyeth thought it unsafe to give either ether or chloroform at once in a case in which cocaine failed to produce the desired anæsthesia.

Dr. Holt thought that the proportion of one-tenth of a grain to the pound would not hold good with regard to children. He had seen some very unpleasant symptoms follow the injection of twenty minims of a four-per-cent. solution in a child.

Dr. Schiff had seen two cases of circumcision in which sloughing occurred along the entire line of incision. He had also seen a case in which free parenchymatous hemorrhage occurred about three-fourths of an hour after operating under cocaine. Electricity favored the absorption of cocaine. He had never seen any bad constitutional effects produced by the drug.

Dr. Wyeth remarked that he had not seen any of the unpleasant effects mentioned by Dr. Schiff.

The Society then went into executive session.

"Labor Among Primitive Peoples."—It is said in the *Boston Medical and Surgical Journal* that in one of the largest book-stores of that city the clerks spent all their spare time for half a day looking through the department of political economy in order to find Dr. Engelmann's work with the above title.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CORONERS AND THEIR SALARIES—A STUDENTSHIP IN PATHOLOGY—A MEDICAL BISHOP—RESULT OF THE COUNCIL ELECTION—AN AUTHOR AND HIS HOSTILE CRITIC.

LONDON, November 27, 1886.

THE death of so distinguished a coroner as Sir John Humphreys brings forward once again the question of medical vs. legal coroners. The office has been held by both lawyers and doctors indifferently. Our profession naturally consider a medical man most fit for the office, and among many notable medical coroners have been Mr. Wakley and Dr. Lankester. Sir John Humphreys, however, although a lawyer, was esteemed so highly that he was elected to the presidency of the Coroners' Society. The appointment of coroner is one of the few valuable appointments open to medical men. The one now vacant is worth $10,000 a year, a sum far exceeding the salary of any medical officer of health. Our legal friends are astute enough to keep up the salary of any office for which they are eligible. It is, however, mooted that the district now in question should be divided and an additional coroner provided. The work has been very heavy, about five inquests a day being held on an average by the late coroner.

By the side of the princely bequest to his college made by the late Sir Erasmus Wilson, the John Lucas Walker fund appears but small. Yet it amounts to $50,000, and in this country there are not so many scientific endowments that we can afford to despise it. It is to be devoted to the furtherance of original research in pathology, by founding a studentship which will be worth at least a thousand dollars a year (probably more) and tenable for three years. Under certain circumstances the holder of it is eligible to be re-elected for a further term of two years. The student must study at the University of Cambridge during three terms of his tenure of the studentship, but need not be a member of the University, and the competition for the studentship will not be restricted to Cambridge men.

It is seldom that distinction is attained in more than one profession. Such, however, was the case with Bishop McDougall, whose death, after a prolonged period of ill health, recently occurred. He was educated for the medical profession at King's College, London. On becoming qualified he was appointed Demonstrator of Anatomy, and obtained the fellowship of the Royal College of Surgeons of England. He subsequently forsook medicine and, after studying at Oxford, entered the Church. In 1855, he was appointed to the colonial bishopric of Labuan and Sarawak in Northern Borneo. Here he found his medical lore of great service, and some successful operations spread his repute far and wide. On returning to this country he was appointed to a living in the Isle of Wight. The late Bishop was well known and much beloved. His daughter recently married a physician on the staff of the London Hospital.

The result of the Council election is made known this morning, though not yet officially declared. The caucus have scored a victory, and Messrs. Wheelhouse, Foster, and Glover are the successful candidates in the order named, receiving respectively, eight, seven, and six thousand odd votes. The last figure shows how half-hearted has been the support given to Dr. Glover. These figures scarcely tally with the statement made in the advertising columns of the *British Medical Journal*, November 26th, by Messrs. Carter and Ker, that for Messrs. Wheelhouse, Foster, and Glover, "they have received already some nine thousand promises." It is not probable that the election will pass unquestioned. A general meeting of the Association is talked of, and it is probable that one will be requisitioned, and the officials brought to book for the unfair way in which they have acted.

It is not often that an author advertises an unfavorable review of his own work. Yet, on taking up a recent number of the *Birmingham Medical Review*, I find a page of the advertisement department taken to insert a small displayed advertisement of a recent surgical work by a London hospital surgeon. The following quotation from a review of the work in a former number of the same journal, is appended: "A few chapters are fairly satisfactory . . . but only faint praise can be awarded to any others." This advertisement has presumably been designed and ordered by the surgeon in question, and is a droll method of expressing his contempt for the journal which condemns his work. However hard reviewers hit, it is as a rule, only once, and thick-skinned authors comfort themselves with the reflection that it will soon be forgotten. Meanwhile, they advertise the favorable reviews they have obtained. Yet, here is an author who spends money in publishing a hostile criticism on his own work!

"MR. LAWSON TAIT IN A PECK OF TROUBLES."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: When you favored your readers with the information indicated in the above quotation you displayed a far more intimate knowledge of my affairs than I possess myself. I have not yet experienced either of the troubles you refer to. That I could not find Schroeder's statistics is not surprising, seeing that they were published under his assistant's name—a name wholly unknown to me. When I did find them I also found that they wholly confirmed my own conclusion, and that the statements said to be based on them by Dr. Horatio D. Bigelow were wholly untrue. That was trouble for Dr. Bigelow, not for me.

As for your statement that I have recently commenced a suit for libel against somebody for saying something objectionable, it is wholly inaccurate. It is true that Dr. Steele, of Liverpool, published a gross and libellous letter about me, but on inquiry I found he was not worth powder and shot. I am, etc.,

LAWSON TAIT.

BIRMINGHAM, November 14, 1886.

[We presumed at the time that our information was from a reliable source. We are glad now to correct the impression conveyed in the item referred to.—ED.]

THE LONG-BEARD HABIT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Your correspondent, Dr. Curtis, appears to be very fond of long beards, and very indifferent to coat-tails, concerning which latter, indeed, he speaks with much disrespect. Of course he has a right to his prejudices; I know very well that there are some persons who think more of their beards than of their brains, and with good reason. But it was to prevent this class from becoming a prominent one in medicine that your editorial remarks, as I thought, were directed, and I was very glad to read them.

I am sorry that Dr. Curtis does not know what is meant by a "sense of humor," or a "sense of proportion," but as this is a medical journal, and not one for education in the ordinary forms of literary expression, I can hardly be expected to enlighten him now.

Your correspondent thinks that coat-tails will carry contagion as well as a profuse irradiation of whiskers. I cannot agree with him here, and it is certainly not the case with persons who pay the ordinary attentions to personal cleanliness. It is the custom in most parts of the world,

when examining cases of diphtheria, scarlet fever, etc., to bring the face and not the coat-tails in close proximity to the patient. I do not know, of course, what idiosyncrasies may exist in your correspondent's circle of acquaintance.

The plain facts appear to be this, as you have well stated: the customs of society and the precedents in our profession have decreed that long and hairy appendages are not suitable for those who attend the sick. The hair is a carrier of contagion, and long beards are particularly adapted for the lodgment of infectious germs. Let the physician, at least, reduce the risks of this kind as much as possible. Yours,

SANITAS.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 5 to December 11, 1886.

WOODHULL, A. A., Major and Surgeon. Ordered for duty at Post of Fort Leavenworth, Kan. S. O. 138, Department of the Missouri, December 3, 1886.

POPE, B. F., Major and Surgeon. Relieved from duty in the office of the Surgeon-General of the Army, and will report in person to the President of the Army Medical Examining Board in New York City, for duty as member and recorder of the Board. S. O. 285, A. G. O., December 9, 1886.

AINSWORTH, F. C., Captain and Assistant Surgeon. Will repair to this city and report in person to the Secretary of War, and on completion of the duty which may be required of him, will return to his station (New York City). S. O. 280, A. G. O., December 3, 1886.

AINSWORTH, FRED. C., Captain and Assistant Surgeon. Relieved from duty as Recorder of the Army Medical Examining Board in New York City, and ordered to report in person to the Surgeon-General of the Army for duty in his office. S. O. 282, A. G. O., December 6, 1886.

TURRILL, H. S., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Spokane, Wash. Ter. S. O. 209, Department of the Columbia, November 29, 1886.

CARTER, EDWARD C., Captain and Assistant Surgeon. Leave of absence extended six months. S. O. 281, A. G. O., December 4, 1886.

BARROWS, CHAS. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared by his Post Commander. S. O. 285, A. G. O., December 9, 1886.

WILSON, GEO. F., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply to Headquarters of the Division of the Missouri for an extension of twenty days, to take effect about December 15, 1886. S. O. 125, Department of Dakota, December 1, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 11, 1886.

PERCY, H. T., Passed Assistant Surgeon. Ordered to Naval Academy, Annapolis, Md.

NERFLEET, ERNEST, Passed Assistant Surgeon. Granted sick leave for three months.

Medical Items.

BOTTLE-FEEDING AT THE NEW YORK INFANT ASYLUM.—Dr. E. Bradley, of this city, writes: "My attention has been drawn to an excerpt from a recent article by Dr. Lewis Smith, which you published in a late issue of your journal. This article, as it stands, seems to make bottle-feeding babies and *dying babies* synonymous terms. As visiting physician to the Mount Vernon branch of the New York Infant Asylum, I wish emphatically to disclaim, for one institution 'about New York,' any such fatal consequences from *bottle-feeding*. When I assumed duty at the Mount Vernon branch of the New York Infant Asylum, I had already had considerable and encouraging experience in private practice with the use of the peptonizing process, and I at once adopted the method in this institution. I continue, up to this time, to use the Fairchild process with perfect satisfaction. I have never observed any ill results from its use, while I do not hesitate to express the conviction that many lives have been saved by it. I have already, more than two years ago stated that the marked improvement which I was then happy to record in the health of the children at the Mount Vernon institution was due, in my opinion, to the change in the method of feeding, and I now desire to say that further daily experience, both in hospital and private practice, has stronglyconfirmed thisview. Of course I always use *good breast-milk*, if it can be procured; when this is impossible, I invariably use the peptonized milk."

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 11, 1886:

	Cases.	Deaths
Typhus fever	0	0
Typhoid fever	37	14
Scarlet fever	44	5
Cerebro-spinal meningitis	5	5
Measles	495	64
Diphtheria	129	59
Small-pox	0	0
Yellow fever	0	0

MALARIA AND GALL.—Dr. James H. Dunn, of Minneapolis, Minn., writes: "I am charmed with the theory of Mr. Hasty concerning the antagonism between malaria and phthisis mentioned in THE RECORD of October 16th. It enables me to account for the extraordinary symptoms of certain specialists who have recently condescended to be banished to the wilds of Minnesota. They must be suffering from malaria most virulent, at least their systems are saturated with 'gall' unspeakable. Should these gentlemen perish of phthisis, it would explode Mr. H.'s theory beyond repair, since their *systems* are at all times 'sufficiently impregnated with *gall* to destroy the bacillus of consumption,' or any other microbe. I shall, in the future, watch the statistics of phthisis in these persons with great interest, for corroborative evidence of this theory."

THE MALULANI HOSPITAL.—This hospital, established in 1884, at Waluku, Sandwich Islands, under the patronage of Princess Liliuokalani, is for the free treatment and nursing of indigent Hawaiians. It has connected with it a dispensary for the gratuitous distribution of medicines. Foreign patients are also admitted upon the payment of a certain sum for board and treatment. Up to the present time the attendance has been in the proportion of about three foreigners to one Hawaiian, the latter seeming to less readily appreciate the value of medical and hospital treatment. Since the opening of the institution about five hundred patients have been received. The hospital is under the care of the Franciscan Sisters. The first physician in charge was Dr. Enders, who has since been succeeded by Dr. Sutliff.

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Original Articles.

FERMENTATION, PUTREFACTION, AND SUPPURATION, WITH DEMONSTRATIONS AND EXPERIMENTS.[1]

BY H. KNAPP, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.]

MR. PRESIDENT: Will you kindly allow me a few introductory remarks on the importance of bacteriology in the study and practice of medicine.

Last summer I was struck by the first sentence[2] of a paper on Ptomaines, read by Professor Brieger, of Berlin, before the Congress of German Physicians at Wiesbaden, April 14, 1886, viz.: "The different forms of infectious diseases which constitute the bulk of all cases of sickness, are, according to the present standpoint of science, all caused by specific bacteria." This statement surprised me so much the more, as I had had, a few days before, a conversation on bacteriology with a celebrated professor of one of our New York colleges. "Bacteriology," said he, "is of great scientific interest, but in practice what does it signify? *Six diseases!*" This divergence of opinion induced me to seek for some statistics of germ-diseases. Looking up the death reports printed in different medical journals, I found the most extensive records in the *Boston Medical and Surgical Journal*, namely, weekly statements of reported mortality of the principal American cities. In the number for September 2, 1886, I found the following for the week ending August 21st:

New York, with an estimated population of 1,493,039, 736 deaths, of which from

	Per cent.
Infectious diseases	33.30
Consumption	16.38
Croup and diphtheria	4.90
Total	54.58

In the other cities the returns were about the same. Thus I found the *reported* death-rate from infectious disease in American cities to be about fifty per cent. But how many diseases are now recognized to be of bacterial origin without being entered as infectious in the official records; for instance, gonorrhœa, syphilis, the different forms of malaria, anthrax, pneumonia, endocarditis, pleurisy, peritonitis, rhinoscleroma, xerosis, influenza, yellow atrophy of the liver, lepra, whooping-cough, a great number of skin diseases, and a host of others. The statistics in the *Boston Journal* contain, besides what I have mentioned, a column of deaths from diarrhœal diseases as follows (omitting the decimals): New York, twenty-one per cent.; Brooklyn, nineteen per cent.; Boston, twenty per cent.; Baltimore, twenty per cent.; Cincinnati, twenty-seven per cent.; Charleston, thirty-six per cent., etc. The great majority of these deaths, if not all, may be considered as due to germ-disease. If we add these twenty per cent. to the above, and reckon the deaths from pneumonia and the other diseases which I mentioned before, with only ten per cent. of fatal termination, we obtain a death-rate from bacterial diseases of over eighty per cent. It is to be noted that these statistics were compiled when there was no epidemic prevailing. And, gentlemen, this is not all. I have not said a word of the numerous deaths of surgical disease, which, if we except fatal hemorrhage and coarse injury to important organs, may all be attributed to the deleterious influences of bacteria. Add these to the above eighty per cent. with any quota you choose and you will see that, unless I have made a gross mistake, the professor of Berlin, in attributing the vast majority of all diseases to bacterial influences, has said the truth.

It is the knowledge and control of these influences that has, in the last ten years, so surprisingly reduced the death-rate from external diseases, and raised surgery to the proud position it now occupies.

In the advance of medical science surgery takes the lead at the present day, just as, according to Professor v. Bergmann, ophthalmology did at the time of v. Gräfe. It will, therefore, not be without interest and value to inquire what principle has infused such vital power into modern surgery, and whether this principle is likely to advance the other branches of medicine in a like manner. The key-note of modern surgery is expressed by the word antisepsis, which is the application of one branch only of bacteriology. Its scientific foundation is expressed by the words, Fermentation, Putrefaction, and Suppuration, which, in compliance with our president's kind invitation, I have chosen for the subject of my discourse this evening. In presenting this subject to you I shall follow its historical development, passing rapidly over the acquisition of our knowledge on fermentation and putrefaction, but dwelling on the important question of suppuration, in the solution of which a thousand hands are now busily at work with tools so refined, methods of investigation so accurate, and minds so scientifically trained as previous generations had not at their command.

Fermentation.—The scientific study of fermentation began with the investigations of Lavoisier, Fabroni, Thenard, and others, about a hundred years ago. These investigators thought it was a simple chemical decomposition.[1]

Appert preserved animal and vegetable substances by putting them in bottles, well corked, and exposed to a temperature of boiling water.

Gay Lussac (1810) found that in substances preserved in such bottles for years, fermentation was started by letting in a small quantity of oxygen, but then it went on without it, and produced an inordinate quantity of carbonic acid. He declared that oxygen was necessary to initiate fermentation, but not to keep it up. For him fermentation remained a mysterious phenomenon, setting in tardily and proceeding slowly, quite different from other chemical processes.

In 1835 Cagniard-Latour discovered the yeast-plant, and added to this curious *fact* of observation an *idea*, namely, that the yeast causes sucre to ferment by some action of its vegetation and of its life.[2] He found also that the yeast-globules multiplied by budding, whence the name "budding fungi, sprouting fungi," *Sprosspilze* in German. A year later Turpin described the yeast of beer as a vegetable microscopic organism, which he termed Torula cerevisiæ.[3]

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[1] Discourse delivered before the New York Academy of Medicine, December 16, 1886.

[2] Berl. klin. Wochensch., Mai 3, 1886.

[1] For details of the following historic review, I refer to Mr. W. W. Cheyne's excellent book, Antiseptic Surgery.

[2] E. Duclaux: Le Microbe et la Maladie, p. 6. Paris, 1886.

[3] Trouessart; Microbes, Ferments, and Moulds, 1885. Translated in Appleton's International Scientific Series, 1886. $1.50, with 107 illustrations. A very entertaining introduction to bacteriology.

In 1836 Franz Schulze[1] proved that fermentable and putrescible substances did not decompose if, after they had been boiled, the access of atmospheric air was prevented, for instance, by a layer of oil, or if the air, before it reached the substance, had passed through sulphuric acid or some other liquid which retained or destroyed the germs contained in the air. I show you the apparatus as simplified by Pouchet. Urine that was boiled two months ago in a glass retort, which, when cooling, received atmospheric air through a system of Liebig's bulbs partially filled with strong sulphuric acid, is now as clear as when freshly voided.

In 1837 the subject was taken in hand by Schwann, and "to him rather than to Cagniard-Latour must be given the credit of the first real proof of the view that the yeast-cells were the real cause of fermentation."[2] Schwann's apparatus, which I place before you, and with which I have repeated his experiments, consists of a glass retort from which glass tubes lead on the one side into a beaker containing mercury, corrosive sublimate, and olive-oil, on the other form a coil and end in a fine point. In the retort meat is boiled until the life of all substances contained in the apparatus, including germs adherent to its walls, is destroyed. The tapering end of the free tube, through which, during the cooling of the retort, the air entered and was sterilized by heating the coil, is hermetically sealed. [The apparatus and its working are demonstrated.] The meat did not putrefy. Schwann made similar experiments on alcoholic fermentation, thus *proving that the air contains some substance which is destructible by heat, and causes putrefaction and fermentation.* The *gases of the air, being unalterable by heat, cannot be the cause of these processes.*

Helmholtz, after repeating and confirming Schwann's experiments,[3] made a very conclusive experiment, demonstrating that oxygen was not the cause of putrefaction. A meat infusion was boiled in a vessel, into which two platinum electrodes were fixed. After a time long enough to show that no fermentation would take place, an electric current, decomposing a part of the water, was sent through the liquid. The liquid remained pure.

In 1854[4] Schröder and von Dusch examined whether *filtration of the air* would be sufficient to prevent fermentation of boiled liquids. Their apparatus [which was demonstrated] consisted in a retort in which a fermentescible substance was boiled. From its neck a tube connected on one side with a jar having a stop-cook near its bottom, on the other side with a larger tube, which was filled with cotton that had been so heated as to destroy in it all animal and vegetable life. When the boiling had been prolonged long enough to purify the inner walls of the whole apparatus the stop-cock was opened, and as the water was slowly running out fresh air entered through the open tube on the other side, passing through the cotton filter before it reached the retort. The substances in the latter did neither ferment nor putrefy.

Another series of experiments (by Pasteur, Lister, Tyndall, and others) furnishes proof that the air can be purified by letting the particles suspended in it *settle by gravitation.* These investigators employed glass vessels, with tubes having one or several angular bends. I show you three such vessels in which grape-juice, meat-infusion, and milk were boiled four weeks ago. During and after the slow cooling the outside atmospheric air communicated with the air inside the flasks by the bent tubes, and you see that the contents in the three flasks are clear and sweet, whereas specimens taken from the same boiled liquids, on the same day, and left standing in open test-tubes, are decomposed.

The microscope has shown that all fermenting substances contain yeast-plants, and experiments, in various ways, have demonstrated that no fermentation takes place as long as the fermentescible substance is kept free from living yeast-cells. The presence of microbes thus being an essential factor in fermentation, the definition of fermentation ought to express it. We may therefore define fermentation as the *decomposition of carbo-hydrates into simpler compounds by the agency of living microbes.*

Putrefaction is a similar process. The decomposable substance contains nitrogen and sulphur besides carbon, hydrogen, and oxygen. The action of living bacteria is as essential in putrefaction as in fermentation. The species or varieties of these putrefactive micro-organisms are quite numerous. They do not belong to the class of budding fungi, but are fission fungi, either cocci or bacilli. Putrefaction apart from cold, heat, and exsiccation, can be prevented by the same methods which we have considered before. Germs in the putrescible substance, and the vessel which contains it, must be destroyed by heat or chemical substances, and the air, or any object coming in contact with it, must be germ free. The air can be purified (sterilized) by the same four ways which we have discussed in preventing fermentation: 1, By washing it (Fr. Schulze); 2, by heating (Schwann); 3, by filtration (Schröder and von Dusch), and 4, by rest and gravitation, the organic as well as the inorganic particles falling to the floor.

The products of putrefaction are CO_2, H, H_2S, butyric and other fatty acids, ammonia, tyrosin, etc. If there is sufficient access of air (O), there is but little foul smell, H_2O, CO_2, and NH_3 are formed, and the process is called mouldering (*Verwesung*), whereas by insufficient access of air foul-smelling products, H_2S and fatty acids are formed, besides the others, and the process is called putrefaction (*Fäulniss*).

Suppuration.—Is suppuration identical with, or the consequence of, putrefaction? Are the surgeons correct when they say, avoid putrefaction and there will be no suppuration, operate aseptically, treat a wound antiseptically, etc. As long as I believed in the mechanical or biological origin of suppuration, in contradistinction to its specific, *i.e.*, bacterial or parasitic origin, I thought the confusion of these different terms was wrong. But since it was demonstrated that the same species of bacteria produce suppuration as well as putrefaction, those surgeons were justified who, from practical experience, used these terms promiscuously, and more or less interchangeably. The pyogenic fungi will, for instance, curdle and decompose milk, and from putrefying substances bacteria are obtained that have a strong pyogenic action.

Moreover, the suppurating substances are of the same nature as the putrescible; chiefly albuminoids, containing C, H, O, N, and S. The difference only is that suppuration has relation to living, putrefaction to dead substances or tissues. Both are split in simpler and analogous compounds. Yet there is one point not completely settled; is the intervention of bacteria as strictly a necessity—*a cenditio sine qua non*—in suppuration as it is in putrefaction? Many surgeons, judging from the results of antiseptic precautions, have keenly maintained this principle to be, at least, practically true. Scientific research has more and more verified it, and quite recently a few investigators have, on the strength of rigorous experiments, declared that there is no suppuration whatever without the action of living bacteria. Your humble servant, who has followed this question with a keen and unswerving attention, has, until lately, not been so radical. I thought, as the majority of physicians, that bacteria might be a cause of suppuration, but not the only one. Brought up in the ideas of cellular pathology, it seemed natural to me that irritants of different nature might cause white blood-corpuscles to pass through the walls of the vessels and accumulate, together with the movable lymphoid cells, at certain places of the tissue toward which the currents of the juices drove them. A celebrated experiment of Recklinghausen shows a proliferation of the movable contractile corneal

[1] Gilbert's Annalen der Chemie u. Physik, 1836. vol. xxxix., p. 487.
[2] Cheyne, Antis. Surg. p. 6.
[3] Müller's Arch., 1843.
[4] Annalen der Chem. und Physik.

corpuscles, after a frog or cat's cornea has been cauterized in the centre and placed, under appropriate conditions, on the object-table of a microscope for from one to three days. Another similar experiment appeared to me convincing of the possibility of a traumatic origin of suppuration. When a fresh frog's cornea is placed on the heated object-table of a microscope, and watched for an hour or two, we notice that the movable corpuscles emigrate from the tissue to the cut edge. There they cluster and apparently form a streak of pus.

The question of the formation of pus seemed to me of such fundamental importance that I took it up experimentally, and studied it under the following heads:

1. Does traumatism of any kind produce suppuration?
2. Do foreign bodies occasion the formation of pus?
3. Are there any kinds of chemical agents that cause suppuration?

1. On the first question I made a series of experiments in Berlin last winter, and published them in the "Archives of Ophthalmology."[1] I performed all the operations that are practised on the eye, on the one side of a rabbit, with sterilized instruments, in an aseptic way; on the other side the wound was contaminated with an emulsion of a pure culture of some pyogenic fungus. All the former healed by first intention, the latter suppurated with the regularity of a chemical experiment. Since that time I have repeated these experiments, with the same result, and for the sake of illustration I pass round a rabbit, operated on two weeks ago by students, during one of my lectures at the University Medical College. You see that the right eye shows a smooth scar with a perfectly clear eye, whereas the left, where an impure extraction of cataract had been made, shows a deformed eye, a large yellow staphyloma, after suppuration of the wound. Experimenting in this way with pure and contaminated material before the students, and letting them operate on animals in the same way, makes the instruction unusually impressive, convincing, and suggestive. The most persuasive didactic lecture on suppuration falls flat before an audience that has once witnessed two operations performed on the same animal, in the same way, by the same hands, with the only difference that the point of the knife during the second operation was dipped into an emulsion of staphylococcus pyogenes albus. The next day no irritation in the first wound, but the hideous picture of a phlegmonous inflammation in the other. The coarsest operation, the rudest treatment of a wound will not be followed by suppuration if only the pyogenic germs are excluded. In extractions of cataract (in rabbits, of course) I have purposely bruised and lacerated the iris, evacuated almost all the vitreous, then stirred up the rest with a platinum needle that had previously been brought to a glow, and finally scratched with the same needle the ciliary processes in every direction, yet no suppuration ensued; whereas the smoothest and most cautious operations were invariably followed by suppuration when the wound was contaminated in some way by pyogenic fungi, I say pyogenic, not other fungi. Surgeons have long come to this conclusion; yet the experimental test is more convincing than long series of operations, because it furnishes direct evidence by making in the primary and verifying experiments all things equal, except the presence or absence of a certain kind of micro-organism. These micro-organisms are now obtained unadulterated with other material, *i.e.*, in pure cultivations. Gradually we become as well acquainted with their morphological and biological properties as we are with the chemical and physical properties of organic or inorganic bodies. If the addition of a certain microbe determines the result of one of two otherwise equal experiments invariably and unambiguously in a certain direction, if the microbe can be obtained again from the one animal, but not from the other, and if, in new experiments, it always brings about the same results, then we may fairly say that the microbe is the cause of the phenomenon.

If in these cases microbes cause suppuration, are we allowed to conclude that every suppuration is caused by microbes? Not from this fact alone. One of the fundamental observations that led to the introduction of antiseptic surgery was the fact that simple fractures heal without suppuration. But there is an occasional exception to this rule, and a law of nature is never established as long as the exceptions are not explained. In the exceptional cases of suppuration after a simple fracture, a focus of suppuration somewhere else in the body has either been discovered, or its presence can be assumed with certainty. The experimental proof of this fact has been furnished of late by Becker and F. Krause, who observed that simple fractures in healthy animals regularly healed by first intention, but just as regularly suppurated when pyogenic microbes were injected into a vein of the ear. The same observation holds good with extravasated blood, hydrocele liquid, and other sequestrated bodies when kept free from germs in a healthy animal. The experiments of Orth and Wyssokowitsch on ulcerated endocarditis furnish argument in the same line, and the famous operation of bistournage by Chauveau has the entire force of a faultless experiment. This galaxy of facts, which might be increased indefinitely, furnishes indisputable evidence that *mere traumatism, of whatever kind, never causes suppuration.*

2. The second question, *Do foreign bodies, as such, cause suppuration,* may be answered in brief, for Theo. Leber and others have experimentally studied and brought it to a certain final solution. Leber states that indifferent, non-oxidizable foreign bodies, aseptically introduced into the tissues or cavities of the human body, cause no inflammation, in particular no suppuration.[1] I have introduced a number of foreign bodies—for instance, pieces of a hair-pin—aseptically, into the anterior chamber. The hair-pin was old, rusty, and dirty. It was not cleansed, but before its introduction it was brought to a glow. A small piece of the periphery of the cornea was cauterized with a glowing strabismus hook, pierced with a sterilized small knife, the pin was introduced with an aseptic little forceps, pushed more deeply into the anterior chamber, and the wound-canal again sealed with the glowing hook. The foreign bodies caused no suppuration, they lay either free on the iris, or were surrounded by a delicate, apparently fibrous, exudation. In one rabbit (which I show you here), the foreign body in the right eye has been well borne, and lies in the anterior chamber, one end encapsuled, the other free, whereas the most violent phlegmon broke out in the other eye in the first twenty-four hours, and destroyed the globe completely. A similar piece of the same hair-pin had been brought to a glow and introduced in the same way, with the only difference that before the introduction it had been dipped into an emulsion of staphylococcus pyogenes albus. By these and similar experiments previous views, even if entertained by scientists of the greatest merit, are refuted. Among the supporters of the possibility of suppuration by the action of foreign bodies I may mention Pasteur, who, in 1878, claimed to have discovered the *microbe du pus*, derived from hydrant water. Nevertheless he pretended, on the strength of his experiments, that suppuration could be caused by foreign bodies introduced under the skin aseptically. J. Straus found that solid bodies aseptically introduced under the skin, produced no suppuration. Of his excellent method I shall speak presently.

3. I come to the last and most critical question of my subject, *Do chemical agents cause suppuration without the intervention of microbes?* This question has been answered positively by all but a few very recent investigators. Baumgarten, Theo. Leber, Uskoff, Orthmann, Councilman, Rosenbach, Passet, and others, assert hav-

[1] Vol. xv., p. 24, March, 1886.

[1] Trans. Seventh International Medical Congress, 1881, vol. iii., pp. 15–19.

ing convinced themselves that suppuration is caused by certain chemical agents, for instance mercury, oil of cantharides, petroleum, turpentine, and, above all, croton-oil, even if aseptically introduced. Four recent observers, however, contest this assertion on the strength of new and more rigorous experiments. The leading investigator among these four is J. Straus, who for the first time used a perfect aseptic method.[1] A sterilized glass tube, tapering in a point on one side, closed with a sterilized cotton plug on the other, was filled with sterilized croton-oil, and the point sealed up. He sterilized the skin of the animal by singeing it with Paquelin's cautery, stabbed it with a sterilized knife, introduced the thin end of the tube, broke off its point, blew through the cotton plug the oil out into the subcutaneous tissue, withdrew the tube, and sealed the wound-canal by burning its orifice with the cautery. Among 18 injections of turpentine 13 did not produce suppuration; of 5 injections of croton-oil 1 suppurated; of 2 injections of mercury none suppurated. When suppuration ensued he found cocci in the pus.

E. Scheuerlen[2] repeated the experiments of Councilman-Cohnheim,[3] with greater antiseptic precautions, in the laboratory of the surgical clinic (Bergmann's) of Berlin, under the auspices of Dr. Gaffky and Dr. Fehleisen. Small glass capsules, the ordinary vaccine tubes, were sterilized in a Koch steam sterilizer for half an hour, then, by means of a canula needle and a small piston, thrust under the skin of rabbits. Before the operation the skin in the region of the operation had been carefully shorn, and disinfected with a 1 to 1,000 corrosive sublimate solution. After the introduction, the little tube lay in the subcutaneous tissue about ten millimetres distant from the puncture of the skin. The region of the puncture was covered with a thick layer of iodoform collodium. He used about a dozen irritating substances, among others turpentine and croton-oil. A week or ten days after the introduction of the little tubes, when they lay free from irritation under the skin, and the small wound was perfectly healed, they were broken. A hard swelling occurred around them, but suppuration only in one of his thirty-two experiments (croton-oil), in which a puriform exudation extended from the skin all along the stab-wound. In this case the sterilization and healing had been imperfect, and bacteria, which were found in the purulent exudation, must have penetrated into the wound. In no other case were bacteria found in the infiltrated tissue around the broken capsule.

In 1885 a very instructive series of experiments was made by George Klemperer,[4] in Professor Leyden's laboratory at Berlin. Klemperer made injections of different substances, chiefly turpentine and croton-oil. He used Koch's syringe, sterilized in boiling water, and disinfected the skin of the animals by cauterizing it with glowing iron according to Straus. He also made a number of experiments with the glass capsules of Cohnheim and Councilman. Only in a few experiments, in which the precautious had been insufficient, he obtained pus, recognizable as such macroscopically and microscopically. Bacteria were found in it with the microscope and by cultivations. In all other cases he found sero-fibrinous exudation with coagulation-necrosis (Weigert), no bacteria by both microscopic and cultivation tests.

The last author I have to mention is Dr. J. A. Ruys. He made a series of experiments in the Pathological Laboratory of the University of Utrecht, and published them, November, 1885, in the *Deutsche Medicin. Wochenschrift.*[5] He chose the anterior chamber as the best place of experimentation, because the occurring changes could be directly watched from day to day. He injected one or two drops of turpentine or of a mixture of equal parts of croton and olive oils, or petroleum. Only in one of his twenty-one cases he obtained suppuration, in all others he noticed in the anterior chamber a fibrinous exudation, which in a shorter or longer time gradually was absorbed. When the animals were killed and the fibrinous exudation in the anterior chamber was examined, fibrine and leucocytes were found, but no bacteria. Cultivations from the exudation remained sterile. As verifying experiments Ruys introduced into the anterior chamber silk threads impregnated with the oil and an emulsion of staphylococcus pyogenes. Suppuration ensued.

The last-named four authors draw from their experiments the conclusion that *bacteria are the cause of every suppuration.*

This unconditional opinion, gentlemen, is not generally accepted. Even in Berlin where it has the strongest supporters, I found, last winter, the most competent bacteriologists unwilling to adopt it without reserve. It may be so, they said, but thus far it is not demonstrated beyond a doubt. I thought it therefore particularly desirable to subject the third question: *Do chemical agents cause suppuration*, to a further experimental inquiry. In my experiments (they are not yet concluded) I used turpentine and croton-oil, because these two substances have proved the most powerful to initiate or favor suppuration. The action of pure turpentine being less pronounced than that of croton-oil, the majority of my experiments have been made with the latter. Yet some experiments with the former may deserve mention.

Three weeks ago I injected a drop or two of pure sterilized turpentine, with a sterilized Koch's syringe, into the anterior chamber of a rabbit which I show you here. The next day white patches developed in the upper parts of both anterior chambers, no sediment in the lower parts. The patches grew larger and more intense, somewhat resembling corneal pustules. On the fifth day the upper part of the left cornea had become white, and there were some white patches also in the lower part. This condition looking like suppuration, I enucleated the eye, and found in the anterior chamber some flaky deposits on the posterior face of the cornea, of which I made microscopic preparations and four cultivations. The microscopic specimens showed fibrine and lymphoid corpuscles, but no microbes whatever. One of the specimens is under a microscope for your kind inspection. The four culture-tubes which I pass round have all remained sterile. The exudation, therefore, was not purulent, but fibrino-leucocytic. The three nodules in the anterior chamber of the other eye remained stationary for a few days and then began gradually and slowly to disappear. You see now that they have left a trace, but the eye is in good condition.

Turpentine, injected aseptically and in small quantities under the skin, produced some hard swelling, which in the second week began to disappear.

Sterilized turpentine, sixty-six centigrammes, injected into the abdominal cavity of a rabbit, produced no effect either objectively or subjectively. When the animal was killed, at the end of two weeks, no abnormity was found in the abdominal cavity.

Turpentine injected in both anterior chambers of a rabbit produced the same congestion of the iris and the patchy opacity in the upper parts of the anterior chambers as before described. It gradually was absorbed, and the eyes recovered.

The results of the experiments with turpentine were clear and easily obtained; not so those with croton-oil, the *crux experimentatorum.* At first I used croton-oil pure, sterilized, and injected it into the anterior chamber according to Ruys' method, singeing the place of puncture before and after the injection. A portion of the oil flowed out again, producing purulent discharge and diphtheroid deposits of the conjunctiva, and so much blistering of the skin that the surroundings of the eye were denuded to a considerable extent, the cornea ulcerated and sloughed, and the eye atrophied. [Rabbit demonstrated.]

Being as careful as I could, I did not succeed in ob-

[1] Comptes Rendus hebd. des Séances de la Soc. de Biol., December 15, 1883, p. 651.
[2] Virchow's Arch., 1883, vol. xcii., p. 217.
[3] Langenbeck's Arch., 1885, vol. xxxii., p. 500.
[4] Zeitsch. f. klin. Med., vol. x., Nos. 1 and 2.
[5] Vol. xi., p. 825.

taining clean results with injections of croton-oil into the anterior chamber. Through the cornea there always was more or less puriform discharge from the conjunctiva, and though in the first three or four days the drop of oil was clearly seen at the upper border of the anterior chamber, the cornea became hazy, ulcerous, sloughed, and the majority of eyes were lost. Those which I removed before they burst showed no pus in the anterior chamber, but a flaky substance which neither on cultivation nor under the microscope discovered any microbes.

Pure croton-oil, injected under the skin, aseptically, the skin disinfected with the actual cautery before and after the introduction of the point of the syringe, produced a hard swelling, which, being incised, showed no pus, and under the microscope and in cultivations no microbes. In one case such a hard lump sloughed out with sharp, deep edges as if punched out. The wound healed rapidly without suppuration. Klemperer, whose experiments consisted almost exclusively in subcutaneous injections of different *acria*, has studied this mortification of tissue—Weigert's coagulation necrosis—particularly, and describes it well (*l. c.*).

As these experiments lack the demonstrative directness of the injections into the anterior chamber, I endeavored to modify Ruys' method, so as to obtain clean results. I injected a sterilized mixture of one part of pure croton-oil and two parts of olive-oil into the anterior chamber of the right eyes of four rabbits, thrusting the thoroughly sterilized syringe through the sclerotic, lens, and pupil into the anterior chamber. As soon as the opening of the point presented in the pupil I pressed upon the rubber ball, and one or two drops escaped and mounted to the top of the anterior chamber, without disturbing the iris or producing any apparent change in the size and configuration of the chamber. The left eyes of the same rabbits were experimented on in the same way; the croton-oil, however, was mixed with a very small quantity of a pure culture of staphylococcus aureus on agar-agar. After the syringe was withdrawn the point of puncture in the sclerotic was sealed up with a glowing strabismus-hook. The next day the right eyes showed moderate reaction, the drop of oil was distinctly visible in the upper part of the anterior chamber; pupil, iris, and cornea clear. The left eyes discharged pus from the conjunctiva, were swollen, the irides very red, the contents of the anterior chamber muddy. On the third day two of these rabbits died. The right eyes had only a few flakes, no pus in the anterior chamber; their vitreous was clear. The left eyes showed a hemorrhagic exudation, with coherent flakes, and soft, purulent patches in the anterior chamber, and purulent patches in the vitreous. Cultivation and microscopic specimens showed no, or only a few, microbes in the right eyes, but multitudes of microbes in the left.

On the fourth day another rabbit died. Result of the examination the same: Fibrino-leucocytic exudation in the right eye, hemorrhagic, and purulent exudation, with multitudes of microbes, in the left.

The fourth rabbit of this series showed no particular reaction in the right eye. The cornea was hazy, iris and pupil, however, visible. Left eye enlarged, a yellow deposit in lower third of anterior chamber. Animal looked sick, but was not moribund. Killed on the seventh day. In right no pus; some exudation in iris angle, vitreous turbid. Left eye: anterior chamber and vitreous cloudy, containing puriform patches. Dry cover-specimens and cultivations were made from both eyes, and many organs, with the following results: The microscopic specimens showed a few unmistakable cocci in the right eye, multitudes in the left.

Cultivations after seven days: Right anterior chamber one small colony, right vitreous four small colonies. Left anterior chamber and vitreous, luxuriant growths, liquefying gelatine on the third day. Blood from heart, six isolated colonies; blood from kidney, four well-developed colonies. Brain, none.]

I have still to add that in this group of rabbits I injected aseptically small quantities of sterilized croton-olive oil under the skin of the back of the right side, and the same, contaminated with staphylococcus aureus, under the skin of the back of the left side. In neither was there any remarkable reaction. Yet from the left sides tolerably well-developed growths were obtained. In the three before-mentioned rabbits cultivations were made from both eyes. Anterior chamber and vitreous showed abundant growths in the left (infected) eyes, very scant growths from the right.

How shall we interpret these results? Suppuration with luxuriant growths of cocci in the infected organs, some flaky fibrino-leucocytic exudation in the eyes into which croton-olive oil sterilized, and with, it seems, sufficient antiseptic precautions, had been injected, yet these eyes contained some cocci. The answer is given by the more extensive examination of the body of the fourth rabbit. Suppuration with multitudes of cocci was found in the infected eye; no suppuration, but some cocci, were found in the blood, the kidneys, and the other eye. From the focus of suppuration the cocci had passed into the blood and were deposited in the kidneys, the chief place of their elimination, and in the other eye, which by the injection of croton-oil was irritated and in a fit condition for their development.

To remove this uncertainty I made another series of experiments five days ago. Sterilized croton-olive oil was injected into the right eyes of three rabbits, and an emulsion of the same and staphylococcus albus into the left eyes of three other rabbits. The needle of Koch's syringe was introduced through the ciliary body, and advanced close behind the iris until it presented in the pupil. After the withdrawal of the syringe the puncture in the sclerotic was sealed with the actual cautery. The experiments succeeded very well and were remarkably clean. The results were striking; the infected eyes suppurated freely, the others showed only some whitish streaks in the upper parts of the cornea, descending in two rabbits along the posterior surface of the cornea. One of these eyes was enucleated yesterday. There was no pus in the anterior chamber, the vitreous was clear and the inner membranes were healthy. The streaks at the posterior face of the cornea presented themselves as whitish deposits. Under the microscope they consisted of networks and pencils of coagulated fibrine, and of epithelial cells of Descemet's membrane isolated and in clusters. Adherent to these cells and scattered in the specimen were numerous oil-globules; no trace of microbes. Cultivations taken from the striated deposit, kept in a warm room these twenty-four hours, show as yet no growth.

Mr. President and Gentlemen, I have reported substantially on all the experiments I have made. I shall continue them, principally according to the last-named method, which promises to give unambiguous results. As far as these experiments go, and in consideration of like results obtaines by some recent investigators, they furnish, it seems to me, sufficient evidence of the truth of the proposition, that *suppuration in every case depends on the action of microbes*. If, on the one hand, traumatism of any kind, if foreign bodies, if the most irritant chemical agents, if anything you may imagine is not of itself capable of producing suppuration; if, on the other hand, the addition of pyogenic microbes to any irritating substance, or wound, or any lesion whatsoever, produces, under proper conditions, suppuration without fail, we are certainly justified in ascribing to pyogenic germs the causative action in the formation of pus.

In conclusion, gentlemen, two words. What is pus? "An albuminous, non-coagulable fluid containing multitudes of leucocytes." What is suppuration? "The splitting of living nitrogenous tissue into simpler compounds through the influence of certain bacteria." In this way the parallelism of the three processes—fermentation, putrefaction, and suppuration—is established.

Clinical Department.

EPITHELIOMA OF THE AURICLE.

Dr. Douglas A. Joy, of Marshall, Mich., writes: "Dr. Pooley, in his article under the above title, which appeared in The Medical Record of November 20th, speaks of the auricle as being a very rare locality for the occurrence of epithelioma. As I had just treated a case almost identical with that described by Dr. Pooley, I thought it might be of interest to report it. The patient, Mr. F——, is a day-laborer, of Irish extraction, and between sixty and seventy years of age. Some five years ago he froze his ear, and from that time he dates the appearance of a nodule situated on the helix of the auricle. This, at the time I first saw it, about a year ago, seemed to be of a purely verrucous character. I then advised some simple application, and lost sight of him until about a month ago, when he presented himself with the history of persistent pain in the auricle, especially at night, which prevented him from obtaining any sleep. I examined the sore, and found that it had enlarged to about the size of the thumb-nail, and had an ulcerating base. I advised immediate removal, on the ground that it was degenerating into a malignant growth. To this he at once consented. I then marked out with an aniline pencil the lines of proposed incisions, in the shape of a V, with the growth at the base, and injected along the line a few drops of a four per cent. solution of cocaine. After the lapse of about five minutes I proceeded to make the incisions, which were entirely painless. There was very free hemorrhage, but it was at once checked by drawing the edges together with silver wire. No dressings were applied, as he could not be relied upon to keep them in place, and he was allowed to go about his work as usual. He returned next day, with the statement that he had slept all night for the first time in several months, and he feared almost too soundly. The ear had scarcely swollen at all, and there was a very thin scab along the line of incision. The sutures were removed on the fifth day, and the scab came away, with complete healing, in one week. This seems to me a more radical and less painful treatment than that of Dr. Pooley, and the amount of deformity was very slight. I examined the growth with the microscope, and it showed the characteristic nests of epithelium, thus demonstrating its malignant character."

TRAUMATIC ABSCESS OF THE BRAIN.

Dr. J. B. Laidley, of Conway, Mass., reports the following interesting case: "On July 29th a boy, sixteen years of age, placed a loaded shell loosely in a vise, and attempted to dig out the cap, which, of course, exploded, sending the contents of the shell into the floor, while the shell itself struck the boy in the forehead. I was called to see him about twenty minutes after the accident; found him unconscious, with evident symptoms of compression and laceration. Upon making an examination with the finger, I found the shell had broken the frontal bone over the left eye near the median line. The force of the shell had neatly trephined the skull, driving the button of bone through the membranes into the brain, which was then oozing out of the wound. I carefully removed the loose piece of bone with my forceps, took away the portion of brain which was lacerated, and applied a compress and bandage. As soon as the bone was removed the boy became conscious and explained how the accident occurred. During the week following the accident the temperature, pulse, and respiration were very nearly normal, the patient giving no signs of serious trouble except twitching of the muscles; mind fairly clear. On the eighth day the temperature rose to 102°; there was slight delirium, and a small tumor began to protrude from the wound. This hernia increased in size slowly until August 21st, when it was as large as a hen's egg, beating synchronously with the brain, and bleeding freely on the slightest touch. During this time the patient's mind had been slowly failing; he would give half a dozen versions of how he was hurt, all within a few minutes; the muscles were continually twitching; pupil of right eye dilated slightly; left pupil very much contracted. I thought it best to remove the hernia, which I did on August 31st, shaving it down level with the bone. I found the cerebral matter below this tumor discolored and angry-looking; again applied a compress and bandage. The substance removed consisted of softened cerebral matter, infiltrated with blood and lymph. On August 31st the patient had a severe chill, lasting thirty minutes, and the wound, which had given signs of protruding again, receded. From this time until his death there was no protrusion of brain matter, but a thin, watery discharge kept up all the time (four weeks). This discharge was very abundant, wetting a pillow through in two or three hours. His mind now seemed entirely gone, dulness gave way to stupor, and this, in turn, was succeeded by coma, in which state he died. Autopsy revealed a large pus cavity behind the seat of injury, and a small collection of pus in the frontal lobe of the right hemisphere. The outer table of bone was not broken around the opening, but there were three cracks in the inner table, running from the opening an inch or more."

TREATMENT OF GLEET BY IODOFORM.

Dr. J. A. Winternitz, of New Castle, Pa., writes: "On June 8, 1885 Mr. A—— came to me for treatment for an old gleet, which was the result of an attack of gonorrhœa, two years previous. I passed a full-sized sound easily, and could discover no indication of stricture with an olive-pointed bougie. I put him on iron and cantharides internally, and a weak injection, and passed a large-sized sound three times a week, for a period of two months; then changed the injection to one of potass iodide, and afterward used fld. ext. ergot, but with no better result. I used the cupped sound, with an application of glycerine and tannin for several weeks, but with no benefit.

"In July I first began the use of iodoform in this manner. I caused a tube to be made of the same shape as a steel sound, open at both ends, with a loosely fitting piston. Partially filling this with finely pulverized iodoform, I first directed the patient to urinate, and then introduced the bougie to the prostatic portion of the urethra, and began distributing the iodoform as evenly and thinly as possible over the whole portion of the urethra through which the instrument had passed. I then directed the patient to refrain from micturition as long as possible. The applications were made twice daily—in the morning, and again in the evening as near the hour of retiring as possible. After a course of treatment lasting fifteen days Mr. A—— was discharged, completely cured, and two months after had no sign of a returning discharge.

"Mr. G—— came to me in January, and I treated him very much the same as I did the preceding case. He had gleet for three years, had been operated on for stricture, but his chronic urethritis still remained after the cutting operation. I used iodoform, as in the case before stated, and succeeded in obtaining a cure in seventeen days.

"Mr. D—— came to me in January for consultation for an old gleet of seven years' standing. He was cured by the use of applications of iodoform in seventeen days. The discharge had ceased after the third day. He had then been compelled to leave the city for a day, and the next morning did not notice any discharge, but was unwilling to cease treatment until he was satisfied of a permanent cure.

"Mr. J—— came to me in April, having had gleet

for two years and a half. In July I made the first application of iodoform, and when it became necessary for him to urinate he was unable to do so for the period of fifteen minutes, and then urination was painful, until a small plug of iodoform had come away. I became more careful in the use of this drug, and have not been bothered by a recurrence of the symptoms. I discharged Mr. J——, cured, in twenty days. I have since treated four cases of gleet, and have had none which resisted treatment longer than four weeks. I always use constitutional tonic treatment in connection with the iodoform, and take considerable care that the iodoform be finely and evenly distributed over the canal, always making an examination for stricture, and treating it, should it exist, by dilatation, before using iodoform."

AN IMPROVED METHOD FOR COMPRESSING AIR.

Dr. E. L. Oatman, of Nyack, N. Y., sends us an account of a simple and apparently very effective method of compressing air for use in atomizing fluids. In the cellar or basement a common galvanized iron range-boiler is placed, and connected by two pipes, entering it below, with the main water-supply and with the drain. At the upper end a tube is attached, which passes up to the physician's office. All the pipes are fitted with stop-cocks. To charge the reservoir, this air-tube and the discharge-pipe are closed, while the supply-pipe is opened. The water now rushes in and places the contained air under a high pressure. When the water ceases to flow, the supply-pipe should be closed. The compressed air may now be used when required by opening the air-pipe, the stop-cock of which is placed in the office. When the pressure is exhausted, the reservoir may be emptied by opening both the air-tube and the discharge-pipe, and the air may then be again compressed as before, by closing the latter pipes and opening the supply-pipe. The discharge-pipe should be of large calibre, say two inches, so that the apparatus may be quickly emptied. The arrangement would be improved, Dr. Oatman writes, by using two connecting reservoirs, allowing the water to enter only the first, which should be the larger of the two, thus compressing the air in the second, where it can be kept ready for use. The water may now be discharged from the first, for which purpose it should be provided with a second air-tube, leaving it ready for instant use when the pressure is exhausted in the second reservoir. All the cocks governing the tubes of the apparatus may be placed in the office, if desired. Ten dollars will cover the entire cost of the apparatus.

CASES OF INTESTINAL OBSTRUCTION.

Dr. Edward Clark, of Hyde County, N. C., reports the case of an ensign in the navy who was suddenly seized, while on duty surveying Pamlico Sound, with pain in the left side of the abdomen. As the pain continued, and the patient began to pass bloody urine, Dr. Clark was summoned. The temperature was 98° F., pulse intermittent but not accelerated; the urine contained blood, and there was constant, not lancinating, pain in the direction of the left ureter; the abdomen was tympanitic over the course of the large intestine, except at the sigmoid flexure, where there was marked dulness. The patient was vomiting, and the bowels were obstinately constipated, straining efforts at stool having been ineffective for several days previously. A brisk mercurial cathartic, and enemas of ox-gall and spirits of turpentine failed to relieve the obstruction of the bowels. After repeated doses of castor-oil the bowels moved thoroughly, and the patient was relieved. The tendency to constipation continued for several days, but yielded to diet and laxatives. During the height of the attack the temperature rose to 100.2° F. The urine was bloody only at the times when the paroxysms of pain were most severe, the symptom being due, the writer believes, to the results of pressure by the fecal mass. The pulse lost its intermittent character after the constipation was relieved. In a similar attack, two years before, the patient had been treated for peritonitis.

Dr. Clark reports a second case of intestinal obstruction occurring in a negress. He ordered aloes, to be followed by castor-oil. This caused the bowels to move, and with the fecal masses came a large number of pledgets of cotton. The patient had a large cavity in one of her teeth, and had been in the habit, for a year or more, of plugging it with cotton. These pledgets became loosened frequently during mastication, and were swallowed with the food. Purgatives had been required to obtain a motion of the bowels, and their action was always attended with severe pain and a gurgling noise in the neighborhood of the ileo-cæcal valve. The patient had been bedridden and emaciated, but is now, two years after the above occurrence, in perfect health.

A SIMPLE SUBSTITUTE FOR HARE-LIP PINS.

Dr. Charles F. Mason, U.S.A., of Fort Huachuca, Ariz. Terr., reports the following case as an illustration of how much can be accomplished with simple means: "A. B——, a robust female child of three months, was brought to me by the mother, with the request that I should operate upon its hare-lip at once, as she was compelled to go to the country and could not return for some time. The fissure was single, on the left side, and extended up just within the margin of the nostril. Having no hare-lip pins at hand, and not liking the wire suture for this purpose, I began to look around for a substitute. I soon found in a dry-goods store a 'toilet pin,' which I thought would answer very well. This pin is one and five-eighths inch in length, has a sharp point, and a glass bead top, which much facilitates its introduction, and is of the finest tempered English steel. The ordinary single-flap operation was performed and two pins introduced, fine catgut sutures being used between the pins, and, as far as possible, along the mucous edges of the incision. The wound was then dusted with iodoform and painted with collodion, and two narrow strips of isinglass plaster carried across the cheeks over the incision, so as to relax the tissues as much as possible. The child was allowed to nurse in the usual way. The pins were withdrawn on the fourth day without difficulty, and were found to be as smooth as upon introduction, and almost as bright. The wound had healed throughout by first intention, and there was only slight irritation where the pins had been, and this, I believe, could have been almost entirely avoided by withdrawing them one day earlier."

A CURIOUS MALFORMATION OF THE RECTUM.

Dr. Frederick T. Simpson, of Hartford, Conn., writes: "A variety of malformation of the rectum not described by Holmes, Gross, Erichsen, or other author, so far as I have read, has recently come under my observation. It consisted in a prolongation of the rectum beyond its usual termination at the anus, across the perineum to the posterior border of the scrotum. It was attached by its upper surface to the median raphé, and presented a small orifice at its termination through which meconium escaped in small quantities, by dint of considerable straining on the part of the child. There appeared to be no sphincter action to this opening, bits of fecal matter remaining partly evacuated. An incision, made just anterior and down to the anus, and kept open by the daily passage of sounds for three weeks, effected a natural condition of the parts, the rest of the tube drying up into a small fibrous cord."

Progress of Medical Science.

SPECIAL INDICATIONS FOR ADOPTING THE HIGH-ALTITUDE TREATMENT OF PHTHISIS.—The good results so frequently obtained in treating phthisis by a prolonged residence at high altitudes are deducible from principles of climatology now very generally recognized. *The Lancet*, October 30, 1886, prints the following suggestive observations on this subject: "The three chief characteristics of the climate of high altitudes are purity of the air, aërial rarefaction, and cold. Purity of the air being equally essential in all types and stages of phthisis, we cannot derive from this factor any help in the selection of cases for the mountain treatment, but the due consideration of the remaining two is capable of affording valuable instruction and guidance. The atmospheric rarefaction throws a greatly increased strain upon the circulatory apparatus; hence we conclude that valvular disease of the heart or feeble circulatory power is a strong contraindication against the adoption of the high-altitude treatment. For a similar reason this method of treatment is inapplicable to persons of advanced age, in whom the arteries are likely to have undergone more or less senile degeneration. The rarefaction of the air increases the number and depth of the respirations, and promotes the elimination of carbonic acid from the pulmonary epithelium. Hence it presses hardly upon those who do not possess a sufficient remnant of functionally competent lung to react to the increased strain thus thrown on the breathing apparatus. Cases, therefore, in which there is extensive destruction of lung tissue are unlikely to profit by the high-altitude treatment. It was long thought that hæmoptysis was a contraindication to having recourse to the mountains—an idea founded no doubt on a mistaken analogy drawn from the experience of mountaineers, who not uncommonly suffer from epistaxis or melæna during their expeditions. Now, no fact in connection with this question is better established than that hemorrhage is rare at high altitudes, even in patients who suffer repeatedly from it while resident on the plains. A little reflection will show that there is no real discrepancy between these apparently divergent phenomena. The conditions of blood-pressure at the orifices of the body and in the lungs are not only not identical, but are actually reversed. Anæmia or congestion at the surface of the body implies an opposite condition of the viscera, and among them of the lungs; hence the fact that epistaxis occurs at high elevations, so far from warranting a dread of hæmoptysis, is rather a ground of security against its occurrence. The prevalence of cold at high altitudes leads us to conclude that cases of phthisis complicated by renal or rheumatic affections, are unlikely to benefit by this line of treatment. We infer, also, that sufficient constitutional vigor to resist the depressing influence of low temperatures is a *sine quâ non* of a successful result; but it must be borne in mind that, while the shade temperature at Davos may be many degrees below, the thermometer in the sun often registers as much as one hundred degrees of heat. This sharp contrast between the sun and shade temperatures is one of the apparent drawbacks to the climate at high altitudes, but the risk of chill is to a very large extent obviated by the extreme dryness of the atmosphere. The combination of cold, dryness, and rarefaction constitutes a climate of a highly stimulating type; hence we should expect to find that phthisical patients of the neurotic temperament would be unduly excited by it, while the torpid and phlegmatic might be expected to profit from such stimulation. Organic nervous disease, marked functional nervous excitement, especially hysteria, and persistent sleeplessness, are, on similar grounds, likely to prove strong contraindications to the adoption of the high altitude treatment. The nature of the response of the organism to disease may afford us valuable guidance in this connection. Where high temperature, rapid emaciation, and much prostration indicate profound constitutional disturbance, we may conclude that the mountain treatment is inapplicable, the probability being that it would tend to aggravate the inflammatory processes and precipitate the fatal issue, which is but too certain to ensue in such cases, whatever line of practice be adopted. On the other hand, cases of chronic and stationary phthisis, with slight constitutional disturbance, are likely to react favorably to the stimulating properties of the climate of high altitudes. The foregoing conclusions, which are fairly deducible from a due consideration of the conditions of the case, are verified by practical experience. The cases that do best at high altitudes are those of simple phthisis in patients who are free from cardiac, renal, or rheumatic complications, and who exhibit a torpid reaction to the disease. Many cases of respiratory disease, other than phthisis, benefit strikingly by the high-altitude treatment, notably cases of delayed convalescence from pneumonia and fibroid pleurisy. Here the explanation is not far to seek. Such cases need before all things a stimulation of the vital powers to enable the affected organs to rid themselves of morbid deposits and resume their normal functional activity, and this stimulation is precisely the most essential physiological effect of the mountain climate. The only precaution necessary in such cases is to guard against a premature adoption of the high-altitude treatment. In early convalescence, where there is still some lingering pyrexia, with feeble digestive power, such a line of practice would run the risk of promoting a recrudescence of disease, but at a somewhat later stage its value is alike theoretically evident and demonstrated by experience."

TREATMENT OF ELEPHANTIASIS BY NITRATE OF MERCURY OINTMENT.—Dr. Neff had a case of elephantiasis in which the size of the legs was reduced one-half by the constant use of an ointment composed of one drachm of nitrate of mercury and one ounce of vaseline, rubbed in well, and the wearing of rubber bandages on the feet and legs.—*College and Clinical Record.*

INTERMITTENT HÆMATURIA.—In the *South African Medical Journal* of September 8, 1886, Dr. Chute says that this affection is very prevalent in King William's Town, and probably also in other parts of the Cape Colony. Rarely has it happened that the patients sought advice for the passing of blood. In the most severe case that fell under his notice the mother of the boy noticed some blood-stains upon the shirt and clothes, and, having read in the papers of the great prevalence of syphilis in the Colony and its spread by native servants, thought the child might have become affected with the disease. In another case, a boy he attended for fractured leg, his mother remarked that this boy of all the family seemed to be the most delicate, and no reason could be assigned. He was under exactly the same conditions as the rest of the family, and while his sisters were strong and robust he was always delicate, and he had an anæmic undergrown look. Upon inquiry it was found that for eighteen months he had suffered from this form of hæmaturia, and upon microscopical examination of the urine the cause of the hæmaturia was at once apparent. The cause of all the cases was Bilharzia hæmatobia. The author then describes the affection as follows: "The symptoms vary very much, the unvarying cardinal one being the passing of blood with the last few drops of urine; this may vary from being a few drops to as much as a teaspoonful; in severe cases it is accompanied by pain at end of micturition and the passing of shreds and flakes of mucus mixed with blood-clot. The feature of the blood coming after the urine has passed is invariable, the first portion being quite clear. Although in recent cases blood passes, yet it may exist without the appearance of any, or in such slight quantities as to escape notice altogether. In one case he remembered questioning

the lad closely about this and he said he had never passed blood. However, on examining the urine microscopically the eggs of Bilharzia were plentiful and also blood-corpuscles, although to the naked eye there was no discoloration. The only other symptom is the effect of this continual drain of blood—the patients look anæmic and delicate, although they do not complain. A boy suffering from this complaint, compared with a healthy boy of the same age, shows by his general appearance that there has been a serious disturbance of growth and nutrition, and he is decidedly anæmic. There is generally in such specimens of urine not only blood but more or less of a flocculent deposit; if this be allowed to settle and with a pipette a portion removed and examined under an inch objective, the eggs of Bilharzia will easily be seen. They are unmistakable, being oval in shape, with one end prolonged into a sharp-beaked spine. Under an inch objective the contained embryo cannot be seen distinctly, but a quarter-inch objective brings out details, and often had he seen the violent wriggling movements to escape from its capsule, with the cilia all round the body in rapid motion, whirling about the free sarcode globules. If the clear upper portion of urine be poured away and the deposit freely diluted with water, the eggs may be observed to hatch and let free the embryo, as a free swimming animalcule; its shape then is elongated, pear-shaped, with one end rather conical, and the upper end flattened. At this end, projecting from the middle, is a supple shaped head, and around this supple head and the shoulders, if he might so call the blunt end of the body, the cilia are more evident and have stronger movement. The body is fringed with cilia all round; the general movement of the free embryo is a rapid forward swimming, with slight undulations from side to side. It does not seem capable of affixing itself by either end, as so many of the rotifera do." To the author's mind the most important point to endeavor to ascertain, was to learn how this disease was contracted, so as to ensure prevention, for every effort to effect a cure, by the use of nearly all the drugs of the Pharmacopœia, had, so far as he was concerned, failed to produce anything but a most transient effect. A great help to this end would be to learn its geographical distribution. The disease common in Egypt seems to be different from the Cape variety, as there it produces dysentery, and often death, and the nematoid worm has often been found in veins of the mesentery and liver by Griesinger and Bilharz.

Alleged Medicinal Qualities of Vegetables.—Spinach has a direct effect upon complaints of the kidneys. The common dandelion, used as greens, is excellent for the same trouble. Asparagus purges the blood. Celery acts admirably upon the nervous system and is a cure for rheumatism and neuralgia. Tomatoes act upon the liver. Beets and turnips are excellent appetizers. Lettuce and cucumbers are cooling in their effects upon the system. Onions, garlic, leeks, olives, and shallots, all of which are similar, possess medicinal virtues of a marked character, stimulating the circulatory system, with the consequent increase of the saliva and the gastric juice, promoting digestion. Red onions are an excellent diuretic and the white ones are recommended eaten raw as a remedy for insomnia. They are a tonic and nutritious. A soup made from onions is regarded by the French as an excellent restorative in debility of the digestive organs.

Frequency of the Pulse in Healthy Men.—Bleuler and Lehman found from experiments upon themselves in bed in the morning, that the number of pulsations increased by drinking hot water or tea, diminished by drinking it cold: they increased by warming the body with covering, and diminished on uncovering, the difference being from ten to fourteen beats a minute. Remaining in bed fasting for twenty-four hours did not vary the frequency of the pulse in the various hours of the day. Mental activity diminished it more or less. A certain influence was produced by weak sensations in the digestive canal, increasing along with the sense of heat and weight in the stomach, with nausea and a slight sense of tension in the intestine, and especially in the rectum, though not with the presence of certain salts, as cooking salt, or saltpetre of soda, which produce this intestinal sense.

Aneurism of the Occipital Artery.—The following instance of this rare condition is reported by Dr. J. Henry C. Simes in the *Polyclinic* of October, 1886. Stephen T——, aged twenty-five, Hungarian, unmarried and a miner, was admitted into the surgical ward of the Episcopal Hospital on August 4, 1886. A very satisfactory history could not be obtained from the patient, on account of his inability to speak or understand any other language but his own; however, Dr. Simes was able to ascertain that the swelling, located at the back of his head, had been noticed by him since he was twelve years of age. He had no recollection of ever having had any injury to the part, nor does he remember ever having had any sickness. There were no evidences of any constitutional diseases. An examination revealed a swelling, situated in the right occipital region, and extending from the middle line of the skull to the mastoid process of the right temporal bone. It was about the size of a large orange, oval in shape, with a slight constriction about its middle. The scalp covering the tumor presented nothing abnormal. A very marked pulsation was evident to the sight, and by palpation it was found to be expansive and to correspond to the cardiac pulse. Pressure upon the occipital artery almost completely arrested the pulsation in the tumor, while pressure upon the posterior auricular artery diminished the force of the pulsation, but did not arrest it. Both the occipital and posterior auricular arteries were increased in size. The growth of the tumor had been gradual, but the pain, which was now a prominent symptom, had greatly increased during the past year. The history and examination of the tumor indicated an aneurism, which seemed to him to implicate the occipital and posterior auricular arteries, the latter in a much less degree than the former. On August 7th, with the assistance of Dr. Nancrede, he made the lower incision for ligating the occipital artery, and passed a catgut ligature around it. This procedure, while it very markedly lessened the force of the pulsations in the tumor, did not entirely arrest them, and it was determined to ligate the external carotid artery. By continuing the incision downward no difficulty was experienced in reaching and tying the vessel, which, when ligated, completely stopped the pulsations in the tumor. A drainage-tube was placed in the wound, its surface dusted with iodoform, the skin was drawn together by silver sutures, and a dressing of bichloride of mercury applied. The wound healed without any complication, except a small abscess which formed in the track of the drainage-tube, and the patient left the hospital on September 2d. On the third day after the operation, August 10th, a very slight pulsation could be felt in the tumor, which was only evident by careful palpation, and at the time the patient left the hospital this pulsation had not increased. The tumor had diminished to one-third of its original size.

Hæmatemesis in Hysterical Patients of both Sexes.—Dr. Ollivier, of Paris, read a paper at the recent Congress at Nancy, on hæmatemesis, more particularly in the absence of the catamenia. In cases of hysteria in both sexes hæmatemesis was met with, and appeared due to a special condition of the nervous system. He asserted that this variety of hæmatemesis, which was too often regarded as symptomatic of ulcer of the stomach, was in reality a form of local hysteria, with gastralgia, accompanied by hemorrhage. The absence of any disturbance of nutrition, the suddenness of the onset, the presence of nervous disturbances, and the prompt re-establishment of health, would generally serve as indications of the true nature of the complaint

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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FASTING AND ITS USES.

AFTER all, the fasting performances which are now going on in Europe may have a beneficial effect in the education not only of the laity, but of the profession. Both these classes are in the habit of paying too much attention to the almighty dinner-table, and of thinking that "stuffing" is a panacea for most of our physical ills. The truth is that our systems are, as a rule, over-supplied, and in most chronic ailments, leaving aside phthisis, the problem is more one of assimilation and excretion than of ingestion. The fact that many, perhaps most, human beings can live for at least two weeks on water alone, and that some can undoubtedly live six or seven weeks on that thin beverage, is one that should be made part of our practical physiological and therapeutical knowledge.

One Mr. John Griscom, of this city, who claims to have fasted several times for periods of two, three, or more weeks, and whose remarks bear the stamp of good sense, gives the following practical statements about fasting: "It is a matter of fact that a person does feel better after a fast of forty-eight hours. It is true that a craving for food will take place in this time, because the system is in the habit of taking food, but after that the sensation does not occur. A person to fast through the will-power, not believing it is right, would destroy the nervous system in two or three days. But if there is a full belief that it can be done without harm, one can do it easily. The trouble is the majority of people believe that it can't be done, and thus people frighten themselves to death rather than starve to death. With the prejudice against fasting wholly removed, anyone in the enjoyment of perfect health could fast two or three weeks without inconvenience. But if a man should fast simply as an experiment, without a full belief that he could do it, he would kill himself."

Mr. Griscom thinks that the elixirs used by Succi and others act by making the person believe fasting not injurious; and it is evident that he regards the mental condition as one of great importance to the person starved.

We do not see that the physiological studies lately made upon the professional starvers, in Italy and France, are likely to add anything to our knowledge of tissue changes or other phenomena of inanition. The matter has been fully gone over by Chossat, Bidder and Schmidt, Moleschott, Voit, and others. Even experimental observations upon man have not been wanting, for Moleschott has studied the phenomena of inanition upon six melancholics who fasted for from twenty-one to twenty-two days.

As a rule, animals die when, in consequence of deprivation of food, their body-weight is diminished from three-fifths to one-half. The length of time taken for this fall in weight, however, varies greatly; certain amphibia and reptiles can live for from six to nine months without food. On the other hand, when deprived of food, most birds and small mammals die in from six to nine days. Singing-birds may die in one day, while birds of prey will live two weeks; dogs die in four weeks, horses in from two to three weeks.

It was known before the time of Tanner or Merlatt that man can live about twelve days without food or drink, and that in stuporous conditions, where the body is in complete rest, the human system can last for twenty or even forty days under the same conditions. Death has occurred, however, in from seven to ten days when no water or food was taken; with water alone death has occurred in eighteen days. Fasting beyond two weeks is, therefore, not always safe. When a person is deprived of food and drink, the sense of hunger is felt for about forty-eight hours; it then disappears—due perhaps to a paralysis of the sensory fibres of the vagus in the stomach. The sense of thirst, however, remains until death. The body-weight steadily diminishes, more rapidly in young animals, who stand inanition badly. When water is taken, the loss of flesh is much less rapid. The waste of tissue attacks the fat first and most completely, the brain and bone least. The muscles and great abdominal viscera are severely affected, losing about half their weight. The blood, relatively to the weight of the body, remains in about the same amount.

The excretion of urea falls, from its daily average of thirty to forty grammes to about eight grammes.

The idea that starvation may prove a powerful therapeutic measure is somewhat fanciful. This is known: that starved animals are more liable to parasitic affections and to septic and contagious diseases. Apart from the sufferings that it entails, therefore, starvation can never be a very safe means of treatment. A form of water-starvation has already been extensively tried in Germany under the name of the "dry-cure," or "Schroth's cure." In this the patients are kept for three or four days on two wine-glasses of hot wine daily; then, after a day of free libations, the fluid is again taken away; meanwhile the patients are subjected to hot wet packs. This treatment has not proved a brilliant success, although it is claimed to have cured cases of inveterate syphilis and gastro-ectasis. With some modifications it has been used successfully in the treatment of heart diseases and dropsical symptoms.

A SUGGESTION CONCERNING THE EXAMINATION OF SPUTA.

A SUGGESTION of some clinical value is made by Dr. R. W. Philp, in the November *Edinburgh Review*, concerning the examination of sputa for the tubercle bacillus. The present methods of detection often fail, he says, on account of the frequent scarcity of the bacillus in

any given specimen, and the tenacious character of the latter renders it difficult to get the film on the cover-glass sufficiently thin and uniform. He advises that the whole sputa for the twenty-four hours should be placed in a conical vessel, very like a urine deposit glass, and that it should be subjected for another twenty-four hours to a uniform heat of 36–39° C. This temperature he considers to fairly represent the temperature existing in the lungs—the habitat, for the time being, of the parasite.

At the end of the above time the thicker portions of the sputa will have settled to the bottom of the glass, and will have lost much of their tenacity. The supernatant fluid can be easily decanted, or a drop of the thickened portion can be withdrawn by means of a pipette. This latter portion can be spread upon the cover-glass with uniformity, and, of course, is much more liable to show bacilli, if present, than a drop of sputum before concentration. They are often five times as abundant.

Furthermore, declares Dr. Philp, this slow, uniform heat, easily obtained by placing the glass on the back part of a range, produces an actual culture or propagation of the bacilli. To the objection that the bacilli grow slowly in natural fluids, such as blood-serum, he replies that the sputa are probably a better culture-medium, and hence produce a more speedy germ-development. In any event, the above method of examination has common sense and simplicity to commend it. It does not interfere with other methods. It rather acts as an adjunct to them.

THE FOOD OF AMERICANS.

PROFESSOR W. O. ATWATER and Mr. Carroll D. Wright have recently investigated the subject of the amount and cost of food used in this country. Chemical analysis of meats, fish, etc., are given, and the comparative cost and nutritive value of the different foods is estimated. As regards their utility to the economy, protein is ranked at five, fats at three, and carbo-hydrates at one. Protein is thus five times as valuable a food constituent as sugar or starch; but its cost varies greatly according to the force that contains it. For example, a pound of protein in beef costs $1.06, in oysters $3.36, in milk 61 cts., and in wheat-flour 12 cts.

Some old and some new dietaries are given. We present in a tabulated form the more striking of these. The food is estimated in grammes, four hundred and fifty-four to a pound, and 28.4 to the ounce.

	Protein.	Fats.	Carbo-hydrates.
German Soldier on war-footing...	151	40	522
London Sewing-girl.....	53	33	315
Cloistered Monk.....	68	11	469
Prize-fighter in training.....	288	88	93
Brewery Laborer.....	190	73	600
Voit's normal diet.....	145	100	500

The authors of the monograph under consideration have made some practical investigations into the dietaries of artisans and working-people in Massachusetts. It was found that the feeding of these classes on a large scale, as in a boading-house, containing seventy-seven persons, costs twenty-two cents per individual daily. In a small mechanic's family, the individual cost is forty-seven cents.

On analyzing the dietary it is found that a Massachusetts Yankee eats 5¼ pounds of food daily, of which 2¼ pounds is some form of animal food and contains over half a pound of pure protein.

The general conclusions regarding the eating habits of Americans are that we, as a people, consume an excessive amount of food, the excesses being most pronounced in the line of meats and sweetmeats. The question arises whether this alleged excess is actually eaten or whether it is not largely wasted. It is not a matter of common observation among physicians that Americans are great eaters. Certainly, as compared with the English, we are abstemious. The average weight of the food, exclusive of liquors, consumed by a healthy adult is from three to four pounds. We doubt if Americans, as a rule, greatly exceed this, although a four-pound diet is attributed to the Yankee of Massachusetts. Americans are an active race, physically and mentally, and need a good deal of food. It is doubtful if they eat too much; beyond any doubt they waste food, eat too large a proportion of sweets, and, furthermore, they do not drink enough.

THE HEALTH OF RAILROAD EMPLOYEES.

THE public is particularly interested in the physical condition of a class of men upon whose carefulness, skill, and physical soundness so many lives depend.

The general opinion has been that the occupation of railroad employees is not a healthy one. Duchesne stated that while in the first few years they may improve in general health, yet at the end of ten years they become tired out; at the end of fifteen they are sufferers; and at the end of twenty they can rarely continue in service. Loyat affirms that varicocele is very frequent among engineers and firemen, and that almost every one has to wear a suspensory bandage. Engineers are especially liable to rheumatism and pneumonia. After some years' service a certain proportion of them develop a dulness of sight and hearing. Others suffer from conditions much like that of a mild form of spinal concussion, *i.e.*, continuous pains in the limbs, with muscular feebleness. Engineers, after some years of the strain which naturally goes with a position involving much anxiety, sometimes develop a peculiar mental state, which may be called cerebral irritation, characterized by excessive nervousness and morbid sensations of dread and fear.

With regard to the important subject of hearing, Lichtenberg, of Buda-Pesth, has just reported the results of his examinations of two hundred and fifty railroad employees. Among this number he found ninety-two, or over one-third, affected with ear disease; thirty-two had catarrhal troubles; in three the labyrinth was involved; and in thirty the external auditory meatus was the seat of some disease.

AT THE ANNUAL MEETING OF THE NEW YORK MEDICO-LEGAL SOCIETY, held December 8th, at the Hotel Buckingham, Dr. Charles K. Mills read a paper on "Benjamin Rush;" and Dr. L. W. Baker, of Baldwinsville, Mass., read a paper on "Epilepsy and Forensic Medicine." The meeting was followed by the annual banquet. Mr. Clark Bell was elected President, and Albert Bach, Esq., Secretary of the Society.

News of the Week.

A POLYCLINIC has been established in Detroit.

THE "DR. BIRD," who has occupied such a distinguished position in the Colin-Campbell divorce suit, is a Mr. Tom Bird, M.R.C.S., of Grosvenor Square, London, who, according to Churchill's "Medical Directory," is instructor in the use of anæsthetics at Guy's Hospital. He is said to be a young man and a bachelor.

POISONED IN A BEER SALOON.—An exchange states, as a matter of news, that a man went into a beer saloon in Berlin and poisoned himself there. The thing is done every day in this city.

THE PITTSBURGH MEDICAL REVIEW is the title of a new medical monthly edited by seven medical gentlemen of Pittsburgh, Pa., viz.: Drs. X. O. Werder, C. S. Shaw, J. J. Buchanan, A. Koenig, P. McCough, J. J. Green, and T. L. Hazzard. The first number is well printed, well made up, and presents altogether a promising appearance.

A NEW HYPNOTIC IS METHYLAL (*Pharm. Zeitg.*, No. 91, 1886). Internally it is given in doses of 1.5 gramme; externally it may be used as a local anæsthetic mixed with oil, wax, and ointment.

THE LOUISVILLE CLINICAL SOCIETY is the title of a new medical organization recently started under the Presidency of Dr. John A. Ouchterlony.

THE "ANTISEPTIC SHAKE" has become a well-recognized convention in the clinics of the city. The surgeon about to operate extends to his invited guest, not his hand, but his elbow, which is gently seized by the latter, a slight pendulum motion is made, the courtesies of the day exchanged, and then the quasi-anatomical relations cease. Thus it is shown that true courtesy is not inconsistent with micro-parasitical innocuousness.

PROFESSORS HARDY AND SAPPEY, of the Paris Faculty of Medicine, have been retired on account of age.

THE MEDICO-CHIRURGICAL SOCIETY OF GERMAN PHYSICIANS OF NEW YORK.—At the annual meeting of the Society, held December 6, 1886, the following officers were elected for the ensuing year: President, Dr. Leonard Weber; Vice-President, Dr. B. Scharlau; Recording Secretary, Dr. Willy Meyer; Corresponding Secretary, Dr. H. J. Garrigues; Treasurer, Dr. A. Krog. The Society appears to be flourishing, the membership having risen to almost two hundred during the current year.

SEVERED DIGITS.—There have been times when the following remarkable case, reported by Dr. O. N. Bradbury, in the *Boston Medical and Surgical Journal*, would have been received with some doubts: "Mr. Editor—The reunion of severed digits is becoming a matter of considerable interest. I have a case it might be well to place among the others already reported. Some nine years ago I was called to ride about half a mile to see a little boy seven years of age. Twenty to twenty-five minutes before my arrival he was in the wood-shed, and very generously holding small sticks upon the chopping-block for a sister, a year or so younger, to cut with a rather heavy axe. The axe came down too near the hand, and severed the forefinger of the left hand, just *above* the second joint. The cut was made square and complete, the severed end falling among the chips, where I found it about twenty-five minutes later. Warmed it fully in warm water; adjusted it with great care; took two stitches, strapped and splinted carefully. Two years afterward, it puzzled me to tell which forefinger had been cut. The merest trace of a scar was found. The action of the joint was perfect, the finger was well nourished, the muscles apparently as strong as those of the other forefinger, and the little fellow would not acknowledge there was any numbness. Yours very truly, ——."

A SURGEON'S SUICIDE BECAUSE OF AN UNSUCCESSFUL OPERATION.—M. Kolomnin, professor at the St. Petersburg Surgical Academy, is reported to have committed suicide after having failed in the performance of a dangerous operation. Many surgeons who read this notice will appreciate, if they do not commend, Dr. Kolomnin's act. The mental depression which some surgeons suffer after an unsuccessful operation, even if no possible blame can be attached, is often very great.

CUNDURANGO WINE has been recommended by Dr. Wilhelmy, of Berlin, and Dr. Hoffmann, of Basle, in cancer and ulcer of the stomach.

THE VARYING STRENGTHS OF PEPSIN.—The *American Analyst* states that experiments show that there are just as many degrees of strength of "concentrated pepsin" as there are lots made.

DEATHS IN THE "BIG FLAT."—The "Big Flat" is an enormous tenement-house in Mott Street, containing a population of 478 persons, most of whom are Roumanians and Poles. The Society for Improving the Condition of the Poor finds that the mortality-rate for three and three-quarter years was 42.40 per 1,000, while that for the whole city was 25.72. Of these, sixty-two per cent. were among children under five years of age.

MEDICO-LEGAL SCIENCE IN NEW YORK.—There is something the matter with medico-legal science in this city. Report says that the Medico-legal Society has fallen into decay; and the Medical Jurisprudence Society has recently been disrespectfully referred to as a "quasi-medical organization." There was a time when medico-legal science flourished in New York. We trust it may yet do so again.

MOLLIN is the name of a new vehicle for the application of drugs to the skin. It is a soft soap containing an excess of fat with glycerine. It is said to be very readily absorbed.

NO PATHOGENIC GONOCOCCUS.—Dr. S. Giovannini, of Bologna, finds five different micro-parasites in the discharges of gonorrhœa. Two are identical with those found in the healthy urethra. None of the other three, when cultivated, produce gonorrhœa.

THE DOCTOR is the title of a new semi-weekly journal devoted to the interests "of physicians and their friends," edited by Charles Avery Wells and published in this city. It aims to fill the somewhat difficult rôle of "a gossip, but not a tattler," "of a gay, but not an unlicensed loiterer," by the doctor's hearth-stone. The first number is a very creditable one.

BRYONIA DIÖICA AS A UTERINE HÆMOSTATIC.—Professor Petresen, of Bukarest, and Dr. Christodoresca, unite in saying that bryonia is a very efficient drug in uterine hemorrhage.

ANOTHER DEATH FROM SUBLIMATE INJECTIONS (1 to 2,000) after child-birth is reported from the clinic of Breisky, at Prague. Sublimate injections will soon have as bad a record as chloroform.

THE NEW TEST FOR SUGAR, PHENYLHYDRAZINE, gives a precipitate of yellow crystals when sugar is present. The test is delicate, but if albumen is present in the fluid it must be removed.

THE OPERATION OF GASTROTOMY FOR A TABLE-KNIFE, recently performed at St. Louis, illustrates the phenomenal promptness of the occidental surgeon, to say nothing of the skill. The patient, a tailor, swallowed a table-knife nine and a half inches long. A surgeon was immediately notified, and thirty minutes later an incision was made in the linea alba, the stomach opened, and the knife removed. The points of interest, says the *St. Louis Medical and Surgical Journal*, were: 1, Performing gastrotomy for the removal of a foreign body *without* establishing an artificial fistula; 2, the fact that this case is unique, no other being on record of a man swallowing a case-knife; 3, the use of the Czerny-Lembert suture on the stomach. The patient at last accounts was out of danger and doing well. He is sitting up and his temperature and pulse are normal. The editor adds: There are on record but four cases of operation for the removal of swallowed case-knives, in each of which the operation for the removal was performed after adhesions had formed between the stomach and the abdominal wall. An account of another case was published by Hartknochs in "Alt und Neues Preussen," 1684, in which a table-knife 18 ctm. long by 1.5 ctm. wide was removed from the stomach by Daniel Schwabe, of Koenigsberg, in 1635. The incision in the stomach "snapped shut," and the viscus was dropped back without being sutured. Five stitches were put into the abdominal incision, and the case recovered. The account of this case, however, is obscure and not well authenticated.

THE ANNOUNCEMENT is made that *The Journal of Nervous and Mental Disease* will hereafter be issued under the imprint of J. H. Vail & Co. (21 Astor Place, New York City). The editor states that the attempt to issue the journal monthly has been highly successful.

PORTRAIT OF HARVEY.—Mrs. Kate Chase Sprague is the possessor of a life-size portrait of Harvey, the discoverer of the circulation of the blood, which she recently loaned to the Lotos Club of New York for one of its art exhibitions. She paid $8,000 for it. It is thought to be a Van Dyke, though it is only positively known that it was painted in the time of Charles I.—*The Doctor.*

THE DEATH OF PROFESSOR GROHE, Professor of Pathological Anatomy at Griefswald is announced. Professor Grawitz is expected to succeed him.

HONORS TO A MEDICAL EDITOR.—The Grand Cross of Isabel the Catholic has been conferred on Dr. Matias Nieto Serrano, editor of *El Signo Medico*, the leading Spanish medical weekly.

A NEW SURGICAL SOCIETY IN BERLIN.—A surgical society has been organized in Berlin, and held its first meeting on November 22d. Her von Adelmann opened the proceedings by explaining the object of the society, namely, to hold meetings once a month, in the lecture-rooms of the various hospitals of Berlin. The presidents, to be taken in alphabetical order, will receive the society each in turn in his own lecture-hall, and will undertake to deliver an address, or to preside during the delivery of one. The first president took for the subject of his address the "Removal of the Diseased Spleen," and gave a historical retrospect of this operation in the "septic era." Professor Bergmann showed a patient, then convalescent, whose spleen he had removed fourteen days before, on account of the presence of hydatids. Herr de Ruyter stated that a mixture of iodoform, ether, and alcohol, killed the most resistant micro-organisms.

THE FIRST EXCISION OF THE SPLEEN in Spain was recently performed by Dr. Ribera at Madrid. The patient was a boy of ten. He died on the day after the operation from shock.

ALL OF DARWIN'S BREEDING EXPERIMENTS are outdone by Dr. Funkhouser, of St. Louis, who recently exhibited a specimen of an embryo five days old, the result of the union of a rooster and a duck. This was the only fertile specimen of sixteen such eggs hatched in an incubator. The doctor thought his experiment tended to upset prevailing ideas about species, general orders, and classes. Dr. Funkhouser states all sources of error, with regard to the roosters and ducks, had been carefully avoided. But we must beg leave to express doubts on this point. We have heard of an Egyptian observer who testified to the fruitful results of an indiscretion between a hippopotamus and an alligator, but the observation has not been confirmed. Dr. Funkhouser's experiment is revolutionary and needs most careful confirmation.

THE VAGINA AS A RECEPTACLE FOR FOOD.—Dr. I. N. Love, of St. Louis, claims that the vagina can be used as a receptacle for food and means of conveying nourishment to the system. The food should be digested by peptonization or the use of diastase.

MARRIAGE AND THE FIRST CHILD.—Even the bright and beautiful period of the honeymoon does not escape the cold scrutiny of science. In six thousand "cases" of matrimony Dr. Ansell found that the primal product of connubial joys was announced on an average at the end of sixteen months. The majority are born before the end of the first year and seven-eights before the end of the second.

WESTERN RAILROAD HOSPITALS.—A daily paper gives the following account of our railroad hospitals, which are, we believe, a peculiarly American institution: The railroad hospital system has been established by two great lines, the Central Pacific and the Missouri Pacific. They are supported by compulsory contributions of from twenty-five to fifty cents a month from the employees. The Missouri Pacific has four hospitals, situated at St. Louis and Sedalia, Mo., and at Fort Worth and Palestine, Tex. There is one chief surgeon, Dr. W. B. Oulten, and an assistant in charge of each hospital.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 16, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT introduced to the Academy Dr. Charles A. L. Reed, of Cincinnati, O., who occupied a seat upon the platform.

The Statistical Secretary, DR. A. B. JUDSON, announced the death of Dr. E. R. Chapin, one of the founders of the Academy, and a generous donor to the library.

The Recording Secretary, DR. A. M. JACOBUS, read letters received from Dr. Alfred L. Loomis and Dr. John C. Dalton, withdrawing their names from the list of nominations for President; also a letter from Dr. T. E. Satterthwaite, declining the nomination for member of the Committee on Library.

DR. H. KNAPP then delivered a discourse on

FERMENTATION, PUTREFACTION, AND SUPPURATION,

in which he demonstrated his subject by means of apparatus and the results of experiments performed upon the eyes of rabbits (see p. 701).

DR. HEITZMAN said that he came from Dr. Knapp's laboratory nearly a convert, yet at the same time a number of very trustworthy observers had been able to obtain suppuration without the aid of micro-organisms. Even the boss physiologist, Koch himself, was not quite convinced of the correctness of the assertion, "No microbes, no pus." The idea that there was a kind of putrefaction in tissue that leads to suppuration he regarded as rather trustworthy. And still he believed that there was something besides bacteriology in pathology, although one could not avoid pitching into the work in this new department of investigation.

The PRESIDENT gave notice of a special meeting to be held December 30th, and also appointed as tellers to serve at the annual meeting Drs. E. S. Peck, A. S. Hunter, and J. A. Andrews.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DISCUSSION ON THE TREATMENT OF VESICAL TUMORS—SPECIAL MEETING OF THE METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION—SIR ANDREW CLARK AND MR. TIMOTHY HOLMES ON MEDICAL PROVIDENT INSTITUTIONS—DEATH OF DR. WILTSHIRE.

LONDON, December 8, 1886.

AT the last meeting of the Clinical Society the subject of vesical tumors and their treatment was discussed at some length. Sir Henry Thompson opened the discussion by reading a paper in which he gave the history of six cases. Three of these were operated on by the suprapubic method, two by perineal section, and from one patient (a female) the tumor was removed by dilatation of the urethra. In two out of the six cases a complete cure was obtained as the result of the operation; in two others life was prolonged; in the remaining two cases sufficient time had not yet elapsed to speak with certainty as to the ultimate result.

Mr. Bernard Pitts read notes of a case of tumor of the bladder in which the perineal operation having been performed two years previously, the suprapubic operation was adopted on a return of the symptoms. The original growth was a papilloma, and when the bladder was opened above the pubes it was found that recurrence had taken place at the site of the old pedicle, viz., just below the right ureter. It was removed and the base of the growth scraped with a sharp spoon. In a month the opening in the bladder had closed, all trace of blood had disappeared from the urine, and the patient was free from pain. Discussing the probable future history of the case, Mr. Pitts suggested that under certain circumstances (such as a change in the character of the growth, or if the growth were so luxuriant that successive operations failed to keep it in check) it might be justifiable to give a chance of prolonged life by diverting the ureters. The ureter might be reached by an incision in the groin, ligatured near the bladder, and the end then brought to the surface. After the wound had healed and the kidney was accustomed to the change, the same operation should be done on the opposite side. The growth could then be dealt with through the suprapubic opening and, if necessary, portions of the bladder removed.

Mr. Croft related a case of flat epitheliomatous growth situated behind the trigone. It was not found possible to remove the tumor by the perineal operation, but great relief followed the establishment of the perineal fistula. In the case of a lady the urethra was dilated and the whole growth scraped away by the finger-nail. It was now four months since the operation, and the hæmaturia had not returned.

Mr. Bryant remarked that the founders of that Society would have regarded the suprapublic operation as a rash innovation. He thought it should be preferred to the perineal operation in most cases of extensive growth and growths near the fundus, but perineal exploration ought first to be used. He had operated on twelve cases by the perineal method. One ended fatally; probably, he said, because the suprapubic operation had not been employed. With characteristic courage Mr. Bryant gave the particulars of this case. A fibrous polypoid growth was removed from the fundus of a man's bladder. After its removal a second one was detected, but could not be so readily removed. It was drawn into the perineal wound and snipped off. The patient died from peritonitis, and a small hole was found in his bladder at the site of the polypus last removed. Mr. Bryant narrated two cases in which very severe hemorrhage was caused by the presence of very small tumors—one so small that it was removed through having become caught in the eyelet of a sounding catheter. Both cases were cured by removal of the tumor. Mr. Bryant also related a case in which the whole bladder appeared to be filled with villous growth. Sir Henry Thompson's forceps were used, and a good deal of the growth was removed. The bladder was scraped and the walls roughly wiped with a sponge on a holder. Although reduced by hemorrhage to the last degree of anæmia, the man steadily recovered and remained well for six months. Slight hæmaturia then came on and continued for a week, when it ceased and never recurred.

Mr. Henry Morris said he had operated by the perineal method in five or six cases. In only two cases was further operation thought justifiable. In one of these the tumor was as large as an orange, hard and nodulated. It being found impossible to remove it through the perineal wound, a suprapubic opening was made. The two openings were a great advantage, but it was impossible to remove all the disease. Though the rectal bag was much inflated it was surprising to find how little the bladder had been elevated. Which wound should be closed, the other being left open for drainage? He did not think the suggestion made by Mr. Pitts was too adventurous.

Sir Henry Thompson said washing out the bladder by the catheter was not a certain method of diagnosis. The lithotrite might remove fragments suitable for diagnosis, but this should be done cautiously. He could not with

certainty (even with the finger in the rectum) diagnose a vesical tumor by means of the sound, as the papillomata were very soft. The perineal opening was no disadvantage whatever, and should be the exploratory opening. Drainage afterward through the suprapubic opening was sufficient. The suggestion made by Mr. Pitts was well worth consideration, and he was thankful for a suggestion thrown out by the president (Mr. Bryant) as to the use of a sponge tied round a holder in clearing out an extensive villous growth.

On Friday evening, December 3, a specially convened meeting of the Metropolitan Counties Branch of the British Medical Association was held to consider the action of the two colleges in excluding the Society of Apothecaries from their combination. The question was also raised of the rights of members and licentiates of the College of Physicians to a voice in its management. At present, as at the Surgical College, all power is in the hands of the Fellows. A few years since the movement began for conferring a voice in his College on the "Member" of the College of Surgeons, and an "Association of Members" then formed has now become a powerful body. A similar association may not improbably soon be formed at the sister College. Affairs are more complex there, because there are three grades and the highest grade is only obtainable by election by those already in. As the council propose, and their nominations are *usually* (though not invariably, as proved by a notable occasion during Sir W. Jenner's period of office) accepted, it may be said that election is virtually by favor of the council. At the meeting on Friday the claims of the general practitioner were vigorously enforced. Dr. Morton gave a lengthy account of the circumstances which had led up to the present agitation, and was seconded by Dr. Verdon, one of the secretaries of the newly created Association of General Practitioners. Mr. George Brown gave a short but incisive address. Mr. Timothy Holmes, of St. George's Hospital, then propose a resolution, which was seconded by Mr. Gubb. The only speaker representing the opposition was Mr. Stoker, who deprecated conferring the privileges of the Fellows on the Members.

An important conference took place yesterday afternoon at the Society of Arts, to consider the question of medical treatment at hospitals. Sir Andrew Clark, who presided, said that not only the interests of the sick poor, but also those of the profession were involved in the matter. They had first to decide whether the existence of provident societies was necessary, whether the good they did was more than counterbalanced by the evil, how they should be managed, and whether they should be affiliated to hospitals or have an autonomy of their own.

Mr. Timothy Holmes proposed the first resolution, which was to the effect that medical attendance on the poorer classes ought to be conducted on the principle of sick assurances. Those who could not pay ordinary medical fees should, he said, pay for medical attendance by payments made during health. He feared provident medical institutions could not be made self-supporting unless the members were very numerous. The motion was seconded by Mr. Lushington, Treasurer of Guy's Hospital, and carried unanimously. The next motion was proposed by Mr. Bonsfield, Chairman of the Metropolitan Provident Medical Association, and was "That the attention of the governing bodies of hospitals and other public authorities be called to the necessity for some check in the indiscriminate provision of medical treatment at hospitals and dispensaries." This was seconded by Mr. Nelson Hardy, and carried unanimously. On the motion of Sir Spencer Wells, a committee was appointed to report on "the subject of assurance as applied to the treatment of the sick."

Dr. Alfred Wiltshire died a few days ago. He was for many years Junior Obstetric Physician to St. Mary's Hospital, and only resigned this appointment last year in consequence of prolonged ill health. He made numerous contributions to obstetrical literature. Quite a little discussion on the subject of vicarious menstruation was started last year by the publication of a clinical lecture by Dr. Wiltshire dealing with the subject.

INTERNATIONAL MEDICAL CONGRESS — A LETTER FROM DR. JACOBI.

To the Editor of The Medical Record.

Sir. In the session of the International Medical Congress of Copenhagen I was appointed the American member of the Committee for Collective Investigation, and permitted to select a colleague in the United States. Thus the pamphlets and circulars prepared by, or with the authority of, the General Committee in London, were distributed under the names of N. S. Davis and the undersigned. They were made returnable to my address on January 1, 1887.

As I have resigned my position on the above committee, I require the permission and privilege of notifying, through your journal, the holders of the above pamphlets, that they ought to be sent to N. S. Davis, M.D., 85 Randolph Street, Chicago, Ill., instead of the undersigned.

Very respectfully,

A. Jacobi, M.D.

110 West Thirty-fourth Street, New York.

A QUESTION OF PRIORITY OF INVENTION.

To the Editor of The Medical Record.

Sir: Permit me to call your attention to the fact that the essential improvement in the vaginal speculum of Dr. Hubbard W. Mitchell, described as original in your journal, of December 11, 1886, viz., the flange for the support of the upper buttock, was devised by Dr. Paul F. Mundé, and presented by him before the New York Obstetrical Society, May 17, 1881, its description being published in the *American Journal of Obstetrics*, in 1882 (Supplement to volume xv., p. 15), and in "Mundé's Minor Surgical Gynecology" (p. 83), in 1885.

The constant use of this speculum by Dr. Mundé, and the increasing appreciation in which it is held by the profession, as evinced by the large demand made for it according to the statement of the instrument-makers, would seem to prove the utility of the modification, it being of value not only when making a vaginal examination without assistance, but even when held by a nurse, the freedom of her left hand, which its projecting flange allows, enabling her to aid the operator in various ways.

Brooks H. Wells, M.D.

72 West Forty-fifth Street.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 12 to December 18, 1886.

Williams, John W., Major and Surgeon. Ordered for duty at Jackson Barracks, La. S. O. 205, Division of the Atlantic, December 14, 1886.

Pope, Benjamin F., Major and Surgeon. So much of S. O. 285, A. G. O., December 9, 1886, as directs him to report in person to the President of the Army Medical Examining Board, New York City, for duty as member and recorder of the board, is revoked. S. O. 287, A. G. O., December 11, 1886.

Corson, Joseph K., Captain and Assistant Surgeon. Leave of absence extended seven days. S. O. 288, A. G. O., December 13, 1886.

Ball, R. R., First Assistant Surgeon. Ordered for duty at Fort Riley, Kan. S. O. 144, Department of the Missouri, December 13, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 18, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	10	7
Scarlet fever	28	5
Cerebro-spinal meningitis	6	6
Measles	558	66
Diphtheria	109	50
Small-pox	0	0
Yellow fever	0	0

DR. ARNING AND THE HAWAIIAN GOVERNMENT.—As stated in a previous note in these columns, Dr. Arning, who was called to the Sandwich Islands to make a study of the leprosy prevailing there, has returned to Germany. The immediate cause of his return was a disagreement which he had with the Board of Health at Honolulu. After having been in the islands two years he presented a report to the board, which report was objected to as not being sufficiently complete, and the author was requested to present a fuller and more satisfactory one. Dr. Arning replied that he considered the information given was as complete and conclusive as necessary for a lay Board of Health, and that he did not desire to have a full scientific report published at present, as his investigations were not nearly completed, and would probably need to be continued over many more years in order to allow him to come to positive conclusions. The only answer to this note was that a special committee, appointed by the board to make such reduction in the medical staff of the Government as they deemed advisable, had decided to discontinue Dr. Arning's services on the staff. Judging from the correspondence published by the Board of Health, it would appear as though they had acted somewhat hastily. But whatever the merits of the controversy, it is unfortunate that the labors begun by Dr. Arning, and which were so full of promise, should be so suddenly ended.

NOTES ON OPHTHALMOLOGY.—Galezowski believes that normal tears contain bacilli which penetrate the wound during an operation and produce infection. Antiseptics, according to him, act in operations upon the eye only while they are in contact with the wound. Galezowski would have us, therefore, protect the wound against contact with the tears. Knapp, however, believes the tear is an antiseptic fluid, and I think he is correct. We have many cases to prove that Galezowski is wrong in this matter. Engelskjon declares that the faradic and galvanic currents exert an opposite influence on the limits of the field of vision, and that this influence can be utilized for diagnostic purposes and as a remedy, the current which enlarges the visual field acting beneficially on the disease in question. Myopia, in Germany, is a subject of very serious consideration. The government has solicited expert opinion as to school arrangement, and there is apprehension of the possibility of its spread injuring the efficiency of the army. A large number of Chinese and Japanese have been examined by Holmgren, who found them color-blind to the same extent and in the same way as Europeans. Ackland reports a case of slight ectropion which recovered after the extraction of an eye-tooth. Cocaine and eserine have been successfully used in combination for the relief of glaucomatous pain. Dr. Armaiznac, of Paris, employs a three per cent. solution of cocaine and a solution of eserine 1 to 200. A drop of each is placed in the eye at intervals of six minutes. Very signal benefit resulted in the cases reported by Dr. Armaiznac. Iodol is a combination of iodine and pyrol. This compound is the latest addition to ocular therapeutics and is contributed by an Italian. Iodol possesses anæsthetic and antiseptic properties. It is also said to have a marked influence on the healing process of rebellious ulcers. In phlyctennular keratitis, chronic conjunctivitis, blepharitis marginalis, ulcer of cornea, and affections of lachrymal passages great efficiency is claimed for iodol. It is a grayish-white powder, insoluble in water. It may be employed mixed with equal weights of vaseline, or in alcoholic solution with glycerine.—*Alabama Medical and Surgical Journal.*

PRIZES OFFERED BY THE ACADEMY OF MEDICINE OF PARIS.—The following are some of the prizes, with the subjects, offered by the Académie de Médecine for general competition during 1887: The Academy Prize (10,000 francs): "Vaginal Hysterectomy, the Indications and Operative Procedures." The Argenteuil Prize (10,000 francs); this prize, which is sexennial, will be awarded to the author of the most notable improvement in measures for the cure of urethral strictures, or to the author of the best work on the treatment of other diseases of the urinary passages. The Barbier Prize (2,000 francs) will be given to the discoverer of the most efficient means of curing diseases considered incurable, such as rabies, cancer, cholera, etc. "Encouragement" may be accorded to those who come nearest to attaining the object without actually accomplishing it. The Capuron Prize (1,000 francs): "Post-partum Involution, the Changes and Pathological States which Result." The Civrieux Prize (1,000 francs): "Vesical Neuralgias." The Desportes Prize (1,200 francs), for the best work on "Practical Medical Therapeutics." The Ernest Godard Prize (1,000 francs), for the best work on "External Pathology." The Hygiene of Infancy Prize (1,000 francs): "A Clinical Study of Athrepsia." The Lefèvre Prize (2,000 francs): "On Melancholia." The Portal Prize (600 francs): "On Primary Renal Tuberculosis." The Saint-Léger Prize (1,500 frances), for experiments to produce goître in animals by administering substances extracted from the water or earth of goîtrous regions. The prize will not be awarded unless the experiments have been successfully repeated by the Academy's commission. The Vernois Prize (800 francs), for the best work on hygiene. Competing essays for all these prizes must be sent to the Academy before May 1, 1887, written in French or Latin, accompanied by a sealed envelope and a device to identify the author. The condition of concealment of the author's name does not apply to competitors for the Argenteuil, Barbier, Desportes, Godard, and Vernois prizes.

THE TRIALS OF A MEDICAL EXPERT.—Dr. F. A. Schmidt, writing in *Daniel's Texas Medical Journal*, relates his experience as an expert witness in a trial for rape. He and a brother practitioner were summoned about midnight by a deputy sheriff to examine the victim at her house, and the next day was commanded to go to the county-seat, ten miles distant, to repeat the examination. He was detained for a day or two, at his own expense, then allowed to go home, then summoned again and held for two days, and so on. The jury disagreed, and shortly after that the writer moved to another town one hundred and fifty miles away. Here one day he was arrested and taken in custody of the sheriff to the town where the court was held. The trial was adjourned, but the witness was put under bonds of $500 to insure his next appearance. Now, in order to save his bond he had to watch the case, telegraphing back and forth in order to keep himself advised of the doings of the court. Finally the case was dismissed, but not until Dr. Schmidt had spent over two hundred dollars in money, and lost more through the enforced neglect of his practice. He received no compensation whatever for his worry and trouble.

TREATMENT OF PHTHISIS.—The introduction of sulphuretted hydrogen into the respiratory passages by breathing gives rise to various disturbances, which may terminate, when a sufficient amount is taken, in death; but it was shown by Claude Bernard that when absorbed by the rectum an almost indefinite quantity may be eliminated by the lungs without harm. Dr. Bergeon, of the Faculty of Lyons, has been experimenting on the action of gaseous enemata for some time, and finds them useful in a variety of diseases depending upon the presence of micro-organisms. The practical point was to find a suitable vehicle for the administration of the sulphuretted hydrogen, which should at the same time be without danger to the economy and easily tolerated by the bowel. It is said that carbonic acid fulfils these conditions. It is easily tolerated by the large intestine. It is rapidly absorbed, and is eliminated by the lungs with the medicinal gas it contains. It has, moreover, a therapeutic action itself, which may be the chief factor of this new treatment. Dr. Bergeon states that those who have tried this method in Paris, Lyons, Geneva, and Marseilles, in cases of phthisis, have generally observed a rapid disappearance of the suppuration, with progressive improvement. Expectoration has ceased, and the only stethoscopic signs remaining are of a dry character, and due to cavities and cicatrices. In the last three months the treatment has been tried at the Hôpital St. Antoine. In two cases of asthma, an injection of carbonic acid, charged with sulphydric acid, was made half an hour after admission. The dyspnœa was decreased considerably, and the treatment being continued, the respiration became free, and the attacks did not recur during the treatment. Nine cases of pulmonary phthisis, presenting general and physical signs of the disease, together with bacilli, were treated in the same manner. Cough and expectoration were greatly diminished, and the increase in weight was rapid—from one to two pounds a week, amounting in one instance to nine pounds in six weeks. The bacilli, however, did not disappear from the sputa. Dr. Bergeon recommends his method in phthisis, asthma, whooping-cough, inflammation, bronchiectasis, bronchorrhœa, and pulmonary catarrh. He insists upon the greatest care in its application. The CO_2 should be absolutely pure, and prepared by the action of sulphuric acid on bicarbonate of soda. The recipient should be perfectly free from air, and great care should be taken to prevent the entrance of air at any part of the tube, its introduction into the bowel, even in minute quantities, being said to cause meteorism and enteralgia. Four or five litres of CO_2 charged with sulphuretted hydrogen are sufficient for an injection, which should be repeated twice daily, care being taken not to administer the gas within three hours after a meal. As regards the *modus operandi*, two very important instruments for the production of the gas and its subsequent sulphydration are figured in the *Bulletin de l'Académie de Médecine*, but practically the two points seem to be the introduction of the pure CO_2 into a five-litre bag without admixture with air, and its passage through a sulphureous solution before entrance into the bowel. Those who possess a thermo-cautère will find that, with a little ingenuity, nothing but a bag to hold the CO_2 is necessary beyond the apparatus which works the cautery. The bag being adapted to the aspirating-ball of the thermo-cautère by means of an india-rubber tube, which may be kept closed by a clip instead of the more expensive tap, a rectum-tube is substituted at the other end for the cautery. The bottle of the thermo-cautère being replaced by a more capacious jar holding a pint of sulphydric solution in its lower half, and leaving room for the gas above, the apparatus is complete. Upon removing the clip between the bag and the ball, and working the latter, the CO_2 is aspirated and forced through the solution, where it becomes charged with sulphuretted hydrogen, and then passes on to the bowel. It may be mentioned in this connection that various anti-microbic treatments are being carried out in the Paris hospitals. At Laennec they are using hypodermic injections of eucalyptol, as proposed by Dr. Roussel, who claims that the bacilli are thus destroyed. In the majority of cases this has not been observed; but in one instance, which will probably be communicated to the Academy shortly, the micro-organisms, which were abundant in the sputa on admission, disappeared under treatment. Dr. Filleau claims to obtain a similar result by the use of a one-per-cent. solution of carbolic acid, of which he injects a hundred drops at each operation. No local irritation of any importance follows, if the carbolic acid is chemically pure, in the form of silky crystals. Iodoform increases daily in favor, especially where there is hypersecretion.—*Lancet.*

CANCER AND THE ELIMINATION OF UREA.—The elaborate researches of F. Henri Jean and Eug. Prout on the elimination of urea in cancer show that the daily amount of urea is not lessened in any constant manner in this disease, as has been claimed. They also show that the daily average in hospital patients is below that given in ordinary physiological text-books, being from 21.6 to 8.41 grammes.

ANTIPYRIN has been found by Umbach to reduce the elimination of urea in healthy persons, and thus presumably lessens tissue-waste. Wiczkowski found the reverse true of fever patients.

THE COST OF MEMBERSHIP IN MEDICAL SOCIETIES in Philadelphia, according to the *Polyclinic*, reaches about twenty-five dollars annually.

TO REMOVE FRECKLES.—The following method is recommended by Dr. Halkin: The skin, being washed and dried, is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries, the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration, which is soon replaced by the normal color of the skin.—*American Practitioner.*

CONVULSIONS may be frequently cut short like magic by turning the patient on his left side. Nausea, occurring as an after-effect of chloroform and ether narcosis, may generally be controlled in the same manner.—*Chicago Medical Times.*

MEDICAL AND SCIENTIFIC NEWSPAPERS IN JAPAN.—From recently published statistics of the Japanese press it appears there are seven medical papers, with a monthly circulation of 13,514; nine relating to sanitary matters, with a circulation of 8,195; and two on the pharmacopœia. There are seven devoted to various branches of science.—*Ex.*

SHOT-GUN PRESCRIPTIONS.—A physician in Fort Wayne, according to the Fort Wayne *Journal of the Medical Sciences*, recently prescribed for a baby five prescriptions at once, and one contained seven different drugs, divided into ten doses. Poor baby! Another prescription for an adult, contained fourteen different drugs, divided into forty doses. At last accounts the patients and the doctor were living.

OUR CITY CHARITIES.—Dr. W. Washburn, of this city, writes: Under the heading, "Our Expensive City Government," you make a comparison that implies a state of facts which do not exist. You say that "the average cost of food per capita annually in prison and asylums is $35.51 to $47.12," and then go on to show that the "Department of Charities and Correction spends $100 per capita per annum," without taking into account that this $100 per capita includes the per capita cost of the salaries paid to the officers, as well as the fuel and light, and clothing in the cases of the insane, together with medicines and other necessary things.

MEDICAL LIBRARY OF BOSTON CITY HOSPITAL

INDEX.

A

Abdomen, shot and stab wounds of, 48.
Abdominal section for chronic suppurative peritonitis, 356.
Abortion, assafœtida in habitual, 436.
Abscess, hepatic, 269, 470; mammary, 123, 336; perinephritic, 137; psoas, 271; psoas, treated by aspiration, 403; traumatic, of the brain, 706.
Acetonuria, 245.
Acid, carbolic and chloral, 9; in radical cure of hydrocele, 211; in whooping-cough, 196; chromic, in granular lids, 235; hydrofluoric, in phthisis, 532; lactic, as a caustic, 211; in laryngeal phthisis, 453; nitric, death from inhalation of the fumes of, 185; osmic, 503; oxalic, as an emmenagogue, 268, 631; phenic, in hemorrhoids, 167; salicylic, and benzoic, in typhoid conditions, 573; salicylic, as a curative of epithelioma, 151; bulbous eruption caused by, 529; in diphtheritic coryza, 435; sozolic, 267.
Acne, 306.
Aconite, in the fevers of childhood, 69.
Adams, Dr. F. J., perityphlitic abscess, 151.
Adams, Francis, LL.D., notice of a translation, 186.
Addison's disease, nature of the pigment in, 436.
Advertised, he never, 622.
Agaricine, 503.
Agnew, Dr. C. R., after-treatment of cataract operation, 108; operation for pterygium, 670.
Ague cake, parenchymatous injections of quinine in, 284.
Air, and microbes, 109, 528; compressed, 707; impurity of, 446; without germs, 417, 528, 669.
Air-cells, superficial area of, 100.
Albuminuria, action of drugs in, 360; and prurigo, 39; in children's diseases, 593; functional, 246, 336, 615; in prostatitis, 94; premature labor in, 573.
Alcohol question in France, 391.
Alderson, Dr. M. E., traumatic tetanus, 445.
Alimentation, relation of, to surgery, 302.
Allaben, Dr. Charles S., ice-cream poisoning, 417.
Allen, Dr. Dudley P., laparotomy, 35.
Alexander's operation, 1, 27, 386.
Aloin, 503.
Althaus, Dr. Julius, cerebral syphilis, 421.
Amblyopia of squinting eyes, 190.
Amenorrhœa, permanganate of potassium in, 10, 474.
American Dermatological Association, 274, 302.
American doctors, a misrepresentation of, 520.
American Gynecological Society, 355, 385.
American Neurological Association, 133.
American Ophthalmological Society, 161, 189.
American Otological Society, 101.
American Public Health Association, 496.
American women, post-partum troubles among, 550.
Americans, the food of, 711.
Ammonium, fluoride of, 336.
Amputations, mortality from, 280.
Amygdalitis follicular, 593, 609.
Amyl nitrite as an antidote for opium, 308.
Anæmia, cerebral, 540; hen's blood in the treatment of, 45.
Anæsthesia by Esmarch's bandage, 235; by suggestion, 321; local, 272; local, for electrolysis, 402.
Anæsthetics in England, 447; in childbirth, 54; new local, 159.
Anæsthetization during sleep, 247.
Analgesics, 273.
Anatomy of the male urethra, 659.
Anders, Dr. J. M., book notice, 664.
Anderson, Dr. James, notice of death of, 464.
Andrews, Dr. J. A., the electric light as an illuminator, 258.
Aneurism, double, of the heart, 696; miliary, 490, 696; of the aorta, 203; of the cerebral artery, 470; of the heart and aorta, 212; of the occipital artery, 709; sacculated, of the thoracic aorta, 402.
Angina pectoris, cocaine in, 489; Ludwig's, 518.
Anidrosis, congenital, 268.
Aniline, poisoning by a pencil, 571.
Antifebrin, 294.
Antiferments in summer diarrhœa of infants, 318.
Antipyretics, 272; in fevers, 140; in Vienna, 415.
Antipyrin, 503, 718; and nitrogenous matters, 570; as an analgesic in headache, 293; as an hemostatic, 157; collapse from, 39; contrary action of, 375; failure of, in sunstroke, 344; in pneumonia, 420; in treatment of ulcers, 489.
Antisepsis and Lister, 15.
Antiseptic shake, the, 712.
Anus, venereal diseases of, 623.
Aorta, intra-pericardial rupture of, 69; stenosis of the descending, 491.
Aphasia, 210.
Apomorphia, 194.
Apoplexy, cerebral, with repeated hemorrhages into the seat of lesion, 442; hemorrhagic and miliary aneurisms, 490; hysterical, 435.
Apothecary, evolution of the, 281.
Applicator, a new throat, 501.
Armstrong, Dr. S. E., hyaline casts, 263, 524.
Arning, Dr., 717.
Arsenical poisoning, pseudo-tabes in, 135.
Arteries, ligating both vertebral, 226, 327; ligatures for, 557; notable atheroma of the coronary, 388.
Artery, ligation of the common iliac, 454; occipital, aneurism of, 709.
Arthur, Dr. George, secondary syphilitic contagion, 674.
Articulation, contusion of an, 264.
Ascites, 631.
Asclepias tuberosa, 220.
Ashhurst, Dr. John, Jr., reception in honor of, 691.
Asparagus, poisonous, 15.
Asphyxiated infants, 111, 336, 346, 458, 489.
Assafœtida in habitual abortion, 436.
Association of American Physicians, 17, 194, 216.
Asthenopia, 190.
Astigmatism, 78.
Asylum, a new insane, 157; State lunatic, at Utica, 691.
Atrophy, infantile, of the extremities, 39; progressive muscular, 325.
Atropine, nervous symptoms following use of, 401; peculiar symptom caused by, 39.
Auctioneer's cramp, 135.
Auricle, epithelioma of, 563, 706.
Autopsies, 195.
Autopsy, extraordinary, 546; on the King of Bavaria, 13.

B

Babies and perambulators, 194.
Bacillus tuberculosis, method of staining, 457.
Back, removal of deep-seated tumors from, 677.
Bacteria of dengue, 71.
Bacteriology, 533.
Bacteriotherapy, 328.
Bacteriuria, 684.
Bakers and bad teeth, 560.
Baldness, 380.
Baldwin, Dr. J. B., is there air without germs? 417.
Ball, Dr. A. B., myxœdema, 29.
Barber, Dr. C. F., treatment of inebriety, 371.
Barnes, Dr. Edwin, ivy-poisoning, 157.
Bartholow, Dr. Roberts, book notice, 466.
Bartlett, Dr. W. A., clinical report, 233.
Basedow's disease, 280; malaria simulating, 569.
Bates, Dr. Homer O., intubation of the larynx, 683.
Baths, electric, in eye-diseases, 436; salin in fevers, 657.
Beach, Dr. Wooster, the death-penalty, 6
Beard, Dr. C., quarantine, 420.
Beards, long, 558.
Bejuco, 531.
Belfield, Dr. W. T., suprapubic cystotom 197.
Belladonna in eczema, 580.
Belladonna-poisoning, 488.
Bellevue Hospital, 71.
Bergen, Dr. E. J., a new skin disease, 26
Beri-beri, in India, 363.
Berlin, a new surgical society in, 713.
Best, Dr. J. J., dislocation of third cervi vertebra, 683.
Beta-naphthol, 195.
Betel-nut, 4.
Betin, 445.
Bidwell, Dr. W. D., tape-worm, 123.
"Big Flat," deaths in the, 712.
Bile in the urine, 474.
Billings, Dr. John Shaw, 551; address bef the British Medical Association, 169.
Binz, Dr. C., book notices, 131, 467.
Bismuth salicylate, 503; subnitrate of, 22
Bissell, Dr. Mary T., physical training in Germany, 502.
Blackwell, Dr. Enos T., system in reading 252.
Bladder, irritation of, 68; surgery of, 4 tumors of, 715.
Blandford, Dr. G. Fielding, book notice, 13
Bleyer, Dr. J. Mount, imaginary hydrophobia, 404.
Blindness and fecundity, 340.
Blisters, 576.
Blodgett, Dr. Albert N., bacterial pathology 533.
Blood, differences in, of the human races, 46
Blood-spots, 504.
Blumer, Dr. G. Adler, 691.
Blynn, Dr. F. G., tumors and phenic aci 544.
Board of Health, State of Mass., 293; State of New York, 412; of Syracuse 412.
Bodenhamer, Dr. William, anal fissure i phthisis, 337.
Boldt, Dr. H. J., pessary, 111.
Bone-grafting, 578.
Books, disinfection of, 504.
Boone, Dr. H. W., deep tumors in the region of the back, 677.
Borcheim, Dr. L. E., swallowing a cent, 46
Bottle-feeding of infants, 700.
Bradley, Dr. E., infant feeding, 700.
Bradshaw, Dr. John H, psoas abscess, 46
Brain, notes on the, 134; removal of tum from, 439; surgery of, 604; traumat abscess of, 706; tumors of, 446.
Brain-fissure, 264.
Brains or hair, 526.
Bramwell, Dr. Byron, book notice, 131.
Breast, dissipation of tumors of, by massag 12; painful hypertrophy of, 516; intra-canalicular fibroid of, 614.

:asts, ponderous, 130.
:ath, inflammable, 688.
dgewater, Dr. S. C., coffee and pruritus ani, 630.
ght's disease, 379, 571; and theurinary ferments, 520; eggs in the dietary of, 657.
tish Medical Association, 184, 187, 217, 240, 269, 297, 329, 357.
tish Medical Benevolent Fund, 101.
mides, peculiar ulcer produced by, 469.
ncho-pneumonia, 614.
nson, Dr. E. B., erythanthema syphiliticum, 253.
wn, Dr. F. Tilden, simulated hyaline casts, 458.
wn, Dr. S. A., ivy-poisoning, 222.
wning, Dr. A. G., ivy-poisoning, 222.
ises, 56.
it of the uterus, 165.
an, Dr. David C., 496.
ant, Dr. Joseph D., 523.
ant, Dr. W. H., myxœdema, 545.
onia Diŏica as a uterine hæmostatic, 713.
k, Dr. Albert H., book notice, 524.
klin, Dr. C. A., cataract, 565.
lding, hygienic precautions during the erection of a, 532.
l, Dr. C. S., intra-ocular hemorrhage, 617.
læ caused by salicylic acid, 529.
ke, Dr. John, obituary, 328; the late Dr. John, 353.
nett, Dr. J., hiccough cured by sneezing, 53.
ms, 268.
ush" doctor's experience, 448.

C

cum, epithelioma of, 603.
sarean section, 298, 321, 387, 495.
leine, 68.
lhol, Dr. A. E. de, poisoning from sardines, 320.
culi, urethral, 389; urinary, new solvent for, 7.
culus, biliary, 81; of the tonsil, 474; vesical, suprapubic operation for, 130; large vesical, 364.
dwell, Dr. W. S., antipyretics in Vienna, 415.
ifornia, Northern, as a health-resort, 658; Southern, climatic conditions of, 482, 498.
lus, removal of, by the galvanic current, 209.
omel as a diuretic in heart disease, 322.
abinone, 503.
cer, 572; details of the operation for the removal of mammary, 228; disinfecting powder for, 395; elimination of urea in, 718; of the stomach, 523; supraclavicular, adenopathy in, 657; of the uterus, 560; value of repeated operation in mammary, 345.
nabis indica in headache, 274.
nula for tapping, 501.
sicum, compound tincture of, 158.
cinoma, cutis, 305; multiple, 164.
ies, death from dental, 83.
lsbad, from a medical standpoint, 479, 498.
lyle on the medical profession, 522.
man, Dr. J. H., what can we cure? 416.
roll, Dr. A. L., sex in utero, 74.
ter, Dr. E. C., dislocation of the clavicle, 403; Laveran's malarial germ, 343.
tle, Dr. F. A., quinine, vehicle for, 319; shoe for lame feet, 501.
tration, 634, 635; in mental and nervous diseases, 462.
ts, hyaline, 263; in prostatitis, 94; simulated hyaline, 458, 524.
, death from the bite of a, 410.
aract, 43; extraction of, 158, 162, 565; after-treatment of, 108, 117; napthaline in etiology of, 437.
arrh, gastric, 268; suffocative, artificial respiration in, 435.
stic, a new, 267.
tery, painless, 196.
rerly, Dr. C. S., malformation of the ear, 460.
Cellulitis, submaxillary, 518; *versus* peritonitis, 356.
Census, the tenth, 446.
Cent, swallowing a, 308, 403.
Cerebrum, multiple tumors of, 133.
Cervix uteri, division of, for sterility and dysmenorrhœa, 355; laceration of, 331; treatment of recent lacerations of, 355.
Chace, Dr. H. P., antipyretics in fevers, 140.
Chamberlain, Dr. W. M., Southern California, 482, 498.
Chancre of the eyebrow, 410; of the rectum, 627.
Charities of our city, 718.
Charleston Medical Relief Fund, 328, 354, 411, 473.
Chase, Dr. A. G., source of musk; mammary abscess, 336; vegetable musk, 76.
Cheesman, Dr. Hobart, meatotomy for urethral stricture, 122.
Chewing-gum as a fattening agent, 56.
Chicago Medical Directory, 664.
Chicory, 4.
Child, a monster, 409; a two-pound, 235.
Childbearing, late, 364.
Chinese prescription, 448.
Chisolm, Dr. J. J., cataract extractions, 117.
Chloral hydrate and carbolic acid, 9; hydrate of, in vomiting of pregnancy, 436.
Chlorodyne habit, 327.
Chlorosis, fever of, 21.
Cholecystotomy, 269, 270.
Cholera, 214, 493; in Japan, 130; in New York, 495.
Cholera infantum, 318.
Chondroma of the upper lip, 304.
Chorea, helenin in, 503; of the larynx, 28.
Choroido-cyclitis, 139.
Circulation, treatment of disorders of, 348.
Circumcision, in diabetes, 684; substitute for, 644; under cocaine, 345, 546.
Cirrhosis of the liver, 42.
Claiborne, Dr. J. H., Tenon's capsule, 375.
Clark, Dr. Edward, intestinal obstruction, 707.
Clark, Dr. P. J., poisoning from corrosive sublimate, 345.
Clavicle, dislocation of sternal end of, 403.
Cleft palate, 148.
Cleveland, Dr. Clement, quinine and typhoid fever, 561.
Clinical material, 350.
Coca, 4.
Cocaine, 273; artificial, 575; as an analgesic, 544; Chinese substitute, 420; constitutional symptoms from, 346; discoverer of, 83; habit, 578, 583; in angina pectoris, 489; in gynecology, 57; in labor, 12, 44; in lavage of the stomach, 10; in minor surgery, 460, 698; in tooth-extraction, 475; *vs.* chloroform in whooping-cough, 692; who used it first in circumcision? 690.
Cocaino-mania, 570.
Cochlea, function of, 436.
Cochrane, Dr. John, caffeine used hypodermatically, 68.
Cod-liver oil, 474; how to give to infants, 392.
Coffee, 4.
Coffee-houses, 634.
Coin-swallowing, 516.
Cold, how to prevent, 633.
Colitis, ulcerative, 470.
Colleges, medical, not recognized, 238.
Collodion, 295.
Colocynthin, 503.
Color-vision, 361.
Coma, syphilitic, 422.
Conception, how Turkish women prevent, 83.
Condiments, use of by the sick, 76.
Condurango in gastric troubles, 323.
Condylomata, syphilitic, 545.
Congress of American Physicians and Surgeons, 408.
Consanguinity in marriage, 4.
Consultation, 251.
Consumption, in fowls, 518; pulmonary, 536.
Contagiousness of scarlet fever, 650, 666.
Contusion of an articulation, 264.
Convallaramin, 503.
Convulsions, 718.
Cook, Dr. William H., sex in utero, 52.
Co-ordination, congenital absence of, 471.
Copaiba, balsam, use of, in ophthalmia, 401.
Copeland, Dr. W. P., vesical irritation, 68.
Corning, Dr. J. Leonard, cerebral anæmia, 540.
Corrosive sublimate, intestinal lesions due to, 492.
Corrosive-sublimate poisoning, 197, 613, 672; in obstetric practice, 345.
Coryza, 97, 280; diphtheritic, 435.
Counter-prescribing, 184, 326.
Cow with a wooden leg, 672.
Cowden, Dr. E. J., hydrometria, 123.
Cramp, auctioneer's, 135.
Craniotomy, the alternatives to, 297.
Creasote, 419.
Creighton, Dr. Charles, book notice, 412.
Cremation and the Catholic Church, 158.
Croup and diphtheria, 155.
Culture, medium, 531.
Cure? what can we, 335.
Curette, uterine, 386.
Curtis, Dr. B. Farquhar, syphilis, 653.
Curtiss, Dr. Romaine J., brains or hair, 526; the long-beard habit, 644.
Cuticura, 473.
Cutler, Dr. Condict W., book notice, 160.
Cutter, Dr. Charles K., luxation of the eyelids in a dog, 474.
Cutter's dictionary, 110.
Cuyler, Dr. C. M., notice of translation, 467.
Cyclopean male fœtus, 384.
Cystitis in the female, 348; naphthaline in, 476; puerperal, 211.
Cystotomy, suprapubic, 197.

D

Dana, Dr. C. L., strophanthus, 693.
Darken, the late Dr. Edward J., 663.
Darwin's breeding experiments outdone, 713.
Davis, Dr. W. B., ivy-poisoning, 222.
Dead, how to preserve the, 308.
Deaderick, Dr. C., repeated operation in mammary carcinoma, 345.
Deaf-mutism in Spain, 409.
Death, and burial at sea, 439; certain sign of, 84; from inhaling fumes of nitric acid, 185.
Death-penalty, 89, 222, 417.
Degeneration, hyaline, 460.
Delafield, Dr. Francis, book notice, 131; pulmonary emphysema, 477; treatment of substantive emphysema, 621.
Delirium tremens, 575; hyoscyamine in, 10.
Dengue, 112, 580; bacillus of, 71.
Dentists in England, 420.
Dentistry, is it a specialty in medicine? 642; not a specialty of medicine, 586.
Dermatitis, exfoliative, 306.
Dermoid cyst of the ovary, 388.
Detroit invective, 83.
Dewey, Dr. G. M., what can we cure? 223.
Diabetes, 20, 268; circumcision in, 684; gangrene with, 447; kidney in, 405.
Diagnosis, error in, 257.
Diaphragm, cutting in operations for empyema, 494.
Diarrhœa, 588; chronic, 252; summer, of infants, 318.
Dietetic fallacies, 76.
Digestion, influence of drugs on, 445; retarded by stimulants, 435.
Digits, reunion of several, 543; severed, 712.
Diphtheria, 359, 672; and croup, 155; laryngeal, 645; ozone in, 636; paresis following, 320; turpentine treatment of, 410; whence come the poisons of? 549.
Diplomas, bogus, in Germany, 631; medical, not recognized, 238.
Diplopia, 189.
Diseases, infectious and contagious, 560; inter-state notification of infection and contagion, 496.
Disinfectant for the mouth, 245; new for sick-rooms, 382.
Dispensaries that are needed, 493.
Dispensary not needed, 354.
"Doctor, the," a new semi-weekly medical journal, 712.
Doctors, country, and hard thinking, 633, 686
Dome-trocar, 270.

Doses, memorizing, 376.
Draper, Dr. W. H., anniversary discourse, 589.
Drew, Dr. C., casts and albumen in prostatitis, 94.
Driscoll, Dr. W. E., tape-worm, 263.
Dropsy, peculiar form of, 196.
Drug business in Kansas, 55.
Drugs, cardiac, 261; excretion of by the mammary gland, 294; value of combining, 632.
Drumine, 692.
Drysdale, Dr. Alfred E., notice of translation by, 186.
Dudley, Dr. W. H., memorial notice, 523; the late Dr., 606.
Duhring, Dr. L. A., notice of book by, 159.
Dunn, Dr. J. H., malaria and gall, 700.
Dyspepsia, cardiac, 657.
Dysentery, tenesmus of, 364.

E

Ear, diseases of the middle, 101; effect of sea-bathing on the, 233; epithelioma of, 563, 706; external, malformation of, 151, 346, 460; nerves of, 434; revolver bullet in, 361.
Ears, removal of foreign bodies from, 39.
Eaton, Dr. Frank B., galvano-caustic apparatus for the nose, 230.
Echinococcus in the arm, 460.
Eczema, belladonna in, 580; nervous, 321.
Eichhorst, Dr. Hermann, book notice, 187.
Electric light, effect of upon the eye, 189.
Electricity, dosage of, 134; in gynecology, 387; in the treatment of diseases of the urinary organs, 300; in the treatment of uterine fibromata, 684.
Electrolysis for nævi, 446; in the treatment of urethral stricture, 49, 341.
Electro-physiology, 236.
Electrotonus, 134.
Elephantiasis, 473, 708.
Eliot, Dr. Llewellyn, mammary abscess, 123.
Elliot, Dr. George T., psoriasis in a child, 8.
Ellis, Dr. H. L., umbilical hernia, 401.
Embalming, 168, 476.
Emboli, fat, 163.
Embolism of the medulla, 181.
Emetics and blisters, 576.
Emmet's operation, 331; modification of, 355.
Emphysema, pulmonary, 477, 497; substantive treatment of, 621.
Empyema, 494.
Endarteritis obliterans, 65, 79.
Endocarditis, mycotic, in man, 24; ulcerative, 124, 469.
Entomology in medical jurisprudence, 575.
Epididymitis, 238, 548.
Epilepsy, 136, 640; extract of calabar bean in, 121; from diseased teeth, 183.
Epithelioma, 151; of the auricle, 563, 706; of the cervix, 386; of the lip, 323.
Ergot after labor in obstetric practice, 385; proper use of, 475.
Erich, Dr. A. F., notice of death of, 661.
Erwin, Dr. R. W., asphyxia of new-born, 489.
Erythanthema syphiliticum, 253.
Erysipelas, 126, 275.
Ether, death from, 295; effect upon the larynx, 360; unusual susceptibility to, 95; warm, as an anæsthetic, 11.
Ethoxycaffeine, 267.
Ethyl, iodide of, 74.
Eucalyptol, 517.
Eucalyptus, oil of, in malarial affections, 183.
Euonymin, 503.
Exploratory incision, 555.
Exsection of the tibia, 697.
Extra-uterine gestation arrested by electricity, 330.
Eye, effect of strong light on the, 258; electric baths in diseases of the, 436; gun-cap in, 94; hemorrhage into, 617; inflammation after herpes frontalis, 288; removal of a sliver from, 125.
Eye-drops, paper spoons for, 168.
Eyelid, upper, luxation of, 328.
Eyelids, granular 235; luxation of in a dog, 474.

F.

Fallopian tubes, 252.
Fasting and its uses, 710.
Fasting in Russia, 327.
Fasts, long, 475.
Fat emboli, 163.
Fathers of great men, 504.
Fecundity, and blindness, 340.
Fee, the, 377; payment of the physician's, 447.
Feeding after surgical operations, 673, 693.
Feet, fetid, 472; malformations of, 152.
Fehling's solution, 72, 195.
Felon, 588.
Fellows, Dr. Geo. R., ether spray in reduction of hernia, 517.
Fermentation, 701, 714.
Ferrán's last work on cholera, 493.
Fever, 82; cold applications to the heart in, 351; cerebro-spinal, 441; enteric, 531; malarial, certain elements found in the blood in, 24; puerperal, 77; puerperal, microbe of, 213; scarlet, 531, 546, 605, 672, 685; and cow's milk, 214; and heart disease, 124, 153; and scarlatiniform eruptions, 305; and the puerperal state, 376; can it arise spontaneously? 407; cause, etc., 357; confusion in the treatment, 195; contagiousness of, 650, 666; in the cow, 14; lesions of the skin in, 494; typhoid, after paralysis, 19; bacillus of, 26; do lower animals have it? 325; jugulation of, 275; quinine in, 53, 561, 581, 670; typhus, 531; urethral, 452; yellow, inoculations, 691.
Fevers, antipyretics in, 140; and salt baths in, 657.
Fibro-lipomata, 227.
Fibromata of the uterus and dilatation of the tubes, 11.
Finger, conservative surgery of, 405; decortication of, 210.
Fingers, uniting of severed, 476.
Fish, poisonous, 56.
Fisher, Dr. Harris, quinine in typhoid fever, 54.
Fissure, congenital supra-umbilical, 11.
Fistula, anal, 337; vesico-vaginal, urinal for, 251.
Flint, late Professor Austin, book notice, 524.
Flowers, Dr. J. H., rhus-poisoning, 319.
Fluhrer, Dr. W. H., ligation of the common iliac artery, 454.
Fœtus, human, collocation of a suture and fissure, 133; in utero, maternal impressions on the, 386.
Food of Americans, the, 711.
Foods, infant, 419.
Fracture of spine, 547.
Freckles, 124, 718.
Furuncles, epidemic of, 684.

G

Gall-bladder, ulceration of, 697.
Gall-stones, 245.
Galvanic battery, portable, 137.
Galvano-caustic apparatus, 230.
Galvano-cautery battery, 82; in gynecology, 658.
Gambetta, brain of, 461.
Gangrene, dry, 99; due to arteritis, 602.
Gardner, Dr. J. L., correspondence, 308.
Garrigues, Dr. H. J., non-gravid hydrorrhœa, 630.
Gas, belching inflammable, 616.
Gastritis, chronic catarrhal, 17.
Gastrostomy for removal of a fork, 362; in abdominal pregnancy, 329.
Gastrotomy, the operation of, for a table-knife, 713.
Gelosine, 602; as a vehicle for external medication, 349.
German, Dr. W. H., rhus-poisoning, 319.
Gestation, prolonged, 575.
Gibney, Dr. V. P., cerebral paralysis in children, 393, 413.
Gibson, Dr. Charles B., ice-cream poisoning, 249.
Gilliam, Dr. D. Tod., a curative of epithelioma, 151.
Glaucoma, 191; treated without operation, 69.
Gleet, 97; and iodoform, 706; and stricture, 112.
Glomerulo-nephritis, 25.
Glottis, spasm of in rickets, 22.
Glycosuria, 245, 321; massage in, 268.
Goelet, Dr. A. H., hare-lip operated on under cocaine, 344.
Goitre, suffocative surgical treatment of, 302.
Gonorrhœa, 73, 239; chronic, infectious capacity of, 571; kava-kava in, 45.
Gordon, Dr. John W., vaginal irrigator, 38.
Gould, Dr. E. T., intestinal obstruction, 344.
Gout, 20; and chloride of sodium, 473.
Granger, Dr. William D., book notice, 159.
Grass staggers, 476.
Graves' disease, 216
Gray, Dr. John P., obituary, 636.
Greek, amount needed, 408.
Ground, Dr. W. Edwin, air without microbes, 528.
Gudden, Professor von, 363.
Gummata, precocious, 303.
Gun-cap in the eye, 94.
Gynecology, certain mooted points in, 299; cocaine in, 57; delusions in, 196; galvano-cautery in, 658; the present state of, 616.

H

Hair or brains, 526.
Hamilton, Dr. Frank Hastings, obituary, 185; book notice, 186; resolutions, 215, 239, 466.
Hamilton, Dr. J. B., 72.
Hammond, Dr. William A., book notice, 160.
Handbook of Medical Sciences, 524.
Hands, malformations of, 152.
Hare-lip operated on under cocaine, 344.
Harvey, portrait of, 713.
Harvey, Dr. G. F., shortened umbilical cord, 376.
Hashish, 4.
Hasty, Mr. Emerson E., malaria and phthisis, 448.
Hay-fever, 78, 380.
Haynes, Dr. W. H., bromidic ulcer of the leg, 575; tumor of the rectum, 67.
Haynes, Dr. S., sympathetic ophthalmitis, 401; use of atropine, 401.
Head, medisected, 136; pulsating tumor of, 572.
Headache, cannabis indica in, 274.
Headaches and defective vision, 549.
Hearing among railroad employés, 475; physiology of, 104.
Heart, acute dilatation of, 214; dilatation and fatty degeneration of, 106; diseases of, 242; disease of and over-exertion, 574; disease of and scarlet fever, 124, 153; inhibitory action of, 672; iodides in valvular disease of, 604; malformation of, 615; movements of, 553; paralytic ataxia of, 521, 576; rupture of valve of, 697; tremulous paresis of, 153; two aneurisms of, 696; valves of, 26.
Heath, Mr. Christopher, book notice, 160.
Hedges, Dr. E. W., whooping-cough, 208.
Heel, artificial, by grafting, 150.
Height to weight, 296.
Helenin, in chorea, 503.
Hematemesis, 709.
Hematocele, pelvic, 442.
Hemato-salpinx, 163.
Hematuria, intermittent, 560, 708; miasmatic, 263.
Hemianopsia, 26; bitemporal, 568.
Hemiplegia, syphilitic, 426.
Hemoglobinuria, 615.
Hemoptysis, tracheotomy for, 168, 475.
Hemorrhage, bronchial, due to pine leaves, 573; cerebral, 139; intra-cerebral in the young, 136; intra-ocular, 617; post-partum, morphine in, 392.
Hemorrhoids, 141, 167; clamp operations, 324; cured by excision, 302; treated by carbolic acid, 614.
Hennum, Dr. I. O., book notice, 466.
Hepburn, Dr. Neil J., the ophthalmoscope in the hands of the general practitioner, 208.
Hereditary disease and race culture, 350.

rnia, epigastric, 585; ether spray in the reduction of, 517; Persian mode of treating, 84; radical cure of by a bubo, 152; spontaneous cure of, 42; umbilical, 124, 401.
rpes zoster frontalis, 285.
cough, 560; cured by sneezing, 53.
ıde, Dr. Alfred, herpes zoster frontalis, 285.
, resection of in a phthisical subject, 377.
-disease, 679; bone drainage in early stages of, 348.
schwald, book notice, 131.
bson, Dr. J. A., sacculated aneurism, 402.
micides, 500.
mo caudatus, 252.
mœopathy, 157, 265, 379; history of, 186.
pein, sale prohibited, 504.
spital, for convalescents, 41; for children, 522; the Corean government, 352; mission at Swatow, 56; Soochow mission, 364.
bbard, Dr. Robert, rhus, 601.
bbard, Dr. W. A., rumination, 122.
nt, Dr. Ellsworth Eliot, notice of death of, 238.
nter, Dr. James R., feeding after surgical operations, 673, 693.
tchinson, Mr. Jonathan, 616.
lramnios, uterine, 602.
lrocele, 125, 516; peculiar accident following operation for, 132; radical cure, 211.
drogen, peroxide of in ear disease, 104.
drometria, 123.
dronaphthol, 195.
drophobia, 104, 130, 159, 474; and inoculation, 438; and its prevention, 359; imaginary, 404; in camels, 267; in Lapland, 495; Russian remedy, 580.
drorrhœa, non-gravid, 572, 630.
giene, 560.
oscyamine, 472; in delirium tremens, 10.
oscyamus, and its alkaloids, 689.
perplasia, of the mucous membrane of the mouth, 97.
perpyrexia, rheumatic, 234.
pnotism, 391; in labor, 100; medico-legal aspect of, 504.
steria, 211, 365, 387, 396, 429, 546.

I

-cream poisoning, 71, 154, 167, 249, 306, 417.
thyol, 304; in rheumatism, 349.
osyncrasies, 445.
eros typhou, 531.
gitimacy in Paris, 474.
minator, nasal, 530.
lex-Catalogue of the Surgeon-General's Office, 439.
lia-rubber, organization of, 130.
liana State Medical Society, 45.
briety, 267, 317.
ant, a large one, 491.
ants, asphyxiated, 10, 111, 123, 336, 346, 458, 489; feeding of, 552, 700; summer diarrhœa of, 318; the feeding of, when deprived of breast-milk, 637.
anticide in China, 227.
ectious diseases in Australia, 391.
lammation, peri-uterine, 309.
luvin, 418.
ections, intra-pulmonary, 536; intra-uterine, 296.
uries, railway, 475.
oculations, preventive, 409.
ane, number of in New York, 464; training school for nurses for, 353.
anity and crime, 603; classification, 209; moral, 136.
somnia, 246.
stinct, medical, in animals, 364.
ternational County Medical Society, 473.
ternational Medical Congress, 43, 160, 168, 277, 716.
testinal obstruction, 344, 707.
testinal passages, disinfection, 560.
testine, myriapods in, 125.
Intestines, congenital malformation of, 97; foreign bodies in, 601; movements of, 553.
Intubation of the larynx, 280, 487, 645.
Intussusception in children, 504.
Iodides in valvular disease of the heart, 604.
Iodine, bullous eruptions after, 303.
Iodoform, for army use, 268; in gleet, 706; in phthisis, 152; rash, 531.
Iodol, 531; in ocular diseases, 168, 346.
Iridectomy, 43.
Irrigator, vaginal, 38.
Iron, citrate of, subcutaneous injections of, 93; tincture of the chloride, effect of upon the teeth, 95.
Itch, prairie, 345.
Ivy-poisoning, 129, 221, 440.

J

Jacobi, Dr. A., follicular amygdalitis, 593, 609; International Med. Congress, 716.
Jalap, cultivation of, 644.
Jaundice, catarrhal, 384.
Jay, Dr. John C., Jr., urinal for vesico-vaginal fistula, 251.
Jaw, dislocation of from vomiting, 672.
Jersey, Dr. Charles A., pistol-shot wound of the intestine, 433.
Johnston, Dr. Geo. W., cocaine in gynecology, 57.
Jones, Dr. Charles N. D., lavage of the stomach, 10; stomach-pump, 434.
Jones, Dr. E. H., malformation of the external ear, 346.
Jones, Dr. Mary Dixon, disease of the Fallopian tubes, 252; removal of uterine appendages, 198.
Journalism, ethics of, 28.
Joy, Dr. Douglas A., epithelioma of the auricle, 706.

K

Kales, Dr. J. W., ice-cream poisoning, 167.
Kansas City, high death-rate, 363.
Kava kava in gonorrhœa, 45.
Kearney, Dr. Thomas J., manganese in menstrual disorders, 225.
Kell, Dr. J. B., rhus-poisoning, 319.
Kelsey, Dr. Charles B., venereal diseases of the rectum and anus, 623; hemorrhoids, 141.
Kent, Dr. J. B., belladonna-poisoning, 488.
Kentucky State Medical Society, 46, 77.
Keratosis follicularis, 304.
Keyes, Dr. E. L., radical treatment of varicocele, 317.
Kidney, extirpation of, 377, 570; in diabetes, 405; single, 696
King, Dr. Ferdinand, varicocele, 558.
Kingsley, Dr. B. F., circumcision under cocaine, 546.
Kingsley, Dr. Norman W., dentistry not a specialty in medicine, 586.
Knapp, Dr. H., fermentation, putrefaction, and suppuration, 701.
Knee-joint, excision of, 113.
Knee, gun-shot wound of, 67.
Kucher, Dr. Joseph, book notice, 411.

L

Labium, varix of, 546.
Labor, among the natives of New Guinea, 308; bandage after, 112; cocaine in, 12, 44; complicated by shortened cord, 376; premature in severe albuminuria, 573; the third stage of, 48.
Laidley, Dr. J. B., traumatic abscess of the brain, 706.
Lamp, a flameless disinfecting, 336.
Lancaster, Dr. R. A., purpura hemorrhagica, 346.
Lancet, the editor's confession of faith, 353.
Landolt, Dr. E., book notice, 467.
Lanolin, 272, 304, 603.
Laparotomy, 35, 553; an early, 335; epidemic, 327; for acute suppurative peritonitis, 167; for gun-shot wounds of the abdomen, 215; for pistol-shot wound of small intestine, 433; for purulent peritonitis, 532; for wounds of the intestines, 296; in abdominal wounds, 53; in America, 14.
La Perlèche, 237.
Larynx, chorea of, 28; diphtheria of, 665; intubation of the, 151, 487, 645, 683.
Lathrop, Dr. H. R., the pneumatic cabinet, 112.
Latta, Dr. J. L., coin-swallowing, 516.
Lauer, Dr. Eugene, notice of death of, 552.
Laveran's malarial germ, 343.
Left-handedness, 579.
Legg, Dr. Wickham, book notice, 664.
Legs, paraplegia and anæsthesia of, 124.
Leidy, Dr. Joseph, 557.
Lenox Medical and Surgical Society, 473.
Lens, dislocation of crystalline, 190.
Lenses, cylindrical, etc., 162.
Leprosy in Honolulu, 588, 717; the question of contagion in, 583.
Leucocythæmia, 15.
Lewis, Dr. E. A., spasmodic stricture of the œsophagus, 516.
Letter, London, 49, 80, 107, 165, 192, 247, 334, 361, 414, 443, 499, 526, 557, 639, 669, 699, 715.
Letter, Paris, 51, 81, 166, 275, 362, 500, 556, 585, 641.
Licensing boards in Canada, 216.
Lip, peculiar affection of the lower, 435.
Litholapaxy in Boston, 221.
Lithotomy suprapubic, 240, 631.
Little, Dr. J. W., ivy-poisoning, 440.
Liver, acupuncture of the, 270; cirrhosis of, 42; colloid cirrhosis of, 435; surgery of, 269; with two gall-bladders, 664.
Lockwood, Dr. John F., prairie itch, 345.
Locomotor ataxia, mental symptoms with, 245; peripheral neuritis in, 347.
Long beard, 407, 644, 699.
Lord, Dr. R. McC., Sims' speculum in labor, 489.
Lucæmia, 138.
Lung, absence of right, 615; contusion of, 235; resection of, 377; sub-pleural laceration of, 437.
Lyman, Dr. W. B., bandage after labor, 112.
Lymphadenoma, 302.

M

McBride, Dr. Thomas Alexander, obituary 296.
McBride, the late Thomas A., resolutions, 530.
McCaskey, Dr. G. W., air and microbes, 199, 669.
McKinnon, Dr. John A., quinine as an anaphrodisiac, 489.
McKee, Dr. E. S., consanguinity in marriage, 4.
MacDonald, Dr. R. C., large infant, 491.
MacKenzie, Dr. Morell, book notice, 411.
Maine, Dr. F. E., death penalty, 417.
Malaria and phthisis, 448; bacilli of, 633; disorders of, extended by water supply, 334; pigmented organs of, 470.
Malformations, genital, 460; hereditary, of the hands and feet, 152.
Malignancy, 572.
Malpractice, imprisoned for, 158.
Malulani Hospital, 700.
Mammalian, 251.
Mammen, Dr. E., rhus-poisoning, 252.
Manganese, in menstrual disorders, 225.
Mange, Missouri, 266.
Martin, Dr. Franklin H., local anæsthesia for electrolysis, 402.
Marriage, consanguinity in, 4; and the first child, 713.
Mason, Dr. Charles F., substitute for hair-lip pins, 707.
Massage and tumors of the breast, 12.
Massage in glycosuria, 268.
Massage, physiological effects of, 69.
Mastitis, 168, 331.
Mastoid, operations on, 103, 654.
Maternity Home, 521.
Measles, transmission of, 548, 672.
Medical books published as advertisements, 464.
Medical cases in the courts, 564.

Medical College of the State of South Carolina, 326.
Medical colleges, entrance, examinations for, 40.
Medical colleges in the United States, 194.
Medical education, thorough, 605.
Medical expert, trials of, 717.
Medical formulary, 159.
Medical missionary work, 265.
Medical news, visiting list, notice of, 664.
Medical Practice Act in Missouri, 185.
Medical practice in New Zealand, 111.
Medical Record, contributors to, 13.
Medical Register, and the County Society, 519.
Medical schools, American, 279.
Medical Society of the County of New York, 381, 467; committees, 607; officers, 496.
Medical societies, true objects of, 14.
Medicaments, 271.
Medicine in the future, 99; in the United States, 169; plea for rational, 408; skepticism in, 520; system of practical, 412; the gropings of, 261.
Medicines, patent, 380.
Medico-Chirurgical Society of German Physicians of New York, 712.
Medico-ethical question, 440.
Medico-legal science in New York, 712.
Meigs, Dr. Arthur V., contagiousness of scarlet fever, 650.
Medulla, embolism of the, 181.
Melancholia, 246.
Membrana tympani, functions of the, 96; ulceration of, probably tubercular, 102.
Meningitis, iodides and bromides in, 10; tubercular, successful treatment of, 438.
Menstruation, influence of the ovaries and tubes on, 392; vicarious, 409.
Menthol, 548.
Mercury, 360; bicyanide of for hypodermatic use, 474; elimination of after injections and inunctions, 461; intramuscular injections of in syphilis, 405; nitrite of in elephantiasis, 708.
Merkel, Dr. H. E., round worm, 404.
Merrylees, Dr. John, book notice, 411.
Mesentery, tumors of, 687.
Methylal, a new hypnotic, 712.
Metric abbreviations, 195.
Meynert, Dr. Theodor, book notice, 239.
Mica spectacles, 476.
Microbes, in air, 109, 528; in milk and water, 56; of puerperal fever, 213; of rabies, 213.
Micro-organisms and disease, 126; crystals 166; pyogenic, 161; vitality of in water, 490.
Migraine, 267.
Milk-supply of New York, 637.
Miller, Dr. John S., canula for tapping, 501.
Mind-reading, 661.
Miner, Dr. Julius F., notice of death, 551.
Mineral waters, 84.
Miscarriage, prevention, 405.
Mississippi Valley Medical Association, 185, 220.
Mitchell, Dr. H. W., vaginal speculum, 671.
Mitchell, Dr. S. Weir, 557.
Moles, 305.
Mollin, for applying drngs to the skin, 712.
Molluscum contagiosum, 189.
Monstrosity, 446; a remarkable, 377.
Morphine and apomorphine, 194.
Morphine-taker, how to detect, 383.
Morrhuol, 183.
Morris, Dr. Robert T., book notice, 523; operation for mammary cancer, 228; toy-pistol wounds, 320.
Morrisey, Dr. J. J., severed digits, 543.
Morrow, Dr. Prince A., ice-cream poisoning, 108.
Mortality in different cities, 448.
Morton, Dr. Douglas, summer diarrhœa of infants, 318.
Mouth, antiseptic solutions for, 500; disinfectant for, 235.
Mouth, mucous membrane of, 97.
"Moxie Nerve-food," 530.
Moxon, the late Dr. Walter, 215, 276.
Mumps, 672.
Murderer, medisected head of, 136.
Murrell, Dr. T. E., laparotomy, 335.
Murrell, Dr. William, book notice, 524.
Muscle-jerk, 19.
Muscular disease, 325.
Muscular power, peculiar, 532.
Musk, vegetable, 76; water-melon, a source of, 336.
Mutton, raw, 531.
Myriapods in the intestines, 125.
Myxœdema, 29, 80, 545; acute, 301.

N

Nævi, electrolysis for, 446.
Naphthaline, 560; and cataract, 437; as an anthelmintic, 392; danger of in renal diseases, 588: in cystitis, 476.
Narceine in whooping-cough, 70.
Nares, plugging the posterior, 575.
Neal, Dr. J. C., congenital malformations, 460.
Needle, new open-eyed surgical, 390; wanderings of, 448.
Negro, from a medical standpoint, 56.
Nephritis, scarlatinal, 96; toxic, 446.
Nerve, recurrent laryngeal function of, 124.
Neuralgia, 471; facial, 152.
Neurasthenia, 211, 244; and abdominal belts, 55.
Neuritis, 471; multiple, 351; peripheral, 347.
New-born, asphyxia of, 10, 111, 123, 136, 346, 458, 489: resuscitation, 474.
Newman, Dr. Robert, electrolysis in urethral strictures, 341.
New York Academy of Medicine, 27, 443, 497, 553, 608, 665, 701, 714; Mrs. Woerishoffer's gift, 529; section in obstetrics, 525, 637; section in practice, 498, 609.
New York Neurological Society, 471, 583.
New York Pathological Society, 105, 137, 163, 192, 388, 441, 469, 612, 696.
New York Society for the Relief of Widows and Orphans of Medical Men, 635.
Nitroglycerine, 503; precautions, 522.
Noble, Dr. George H., asphyxia of newborn, 336.
Northrop, Dr. W. P., intubation of the larynx, 487; laryngeal diphtheria, 645.
Nose, examination of the cavities of the, 271; galvano-caustic apparatus for, 230; osteotomy in the, 657.
Nurses, for small children, 266.
Nursing, 505, 525, 638.

O

Oatman, Dr. E. L., compressing air, 707.
Obesity, 76.
Obesity and sterility, 56.
Obstetrical expedient, 196.
Obstetrics in Vienna, 446.
Obstruction, intestinal, 553.
Œsophagus, multiple stricture of, 138; spasmodic stricture of, 516.
Oliver, Dr. J. C., uterine pathology, 179.
Operations, advertising in the papers, 495.
Ophthalmia, gonorrhœal, 401; neonatorum, 90; purulent, 191.
Ophthalmitis, sympathetic enucleation for, 401.
Ophthalmology, 717.
Ophthalmoscope, in the hands of the general practitioner, 208.
Opium, 4; nitrate of amyl as an antidote for, 308.
Orbit, wound of, 377.
Orchitis, 238, 548.
Organism, infinitesimal, 99.
Organization of foreign bodies within animal tissues, 378.
Osteomyelitis, 697; and ulceration, 69.
Osteotomy in the nose, 657.
Otology, 78.
Otorrhœa, radical cure by operation, 581, 688.
Ovarian tumor, spontaneous cure of, 517.
Ovaries, 360.
Ovariotomy, 252, 262; and specialists, 130; in Barcelona, 83; in Russia, 112; new danger, 327.
Ovary, dermoid cyst of, 165; double fibroid of the, 192, 696.
Ozone in diphtheria, 636.

P

Page, Dr. R. C. M., 691; Carbuncle, a medical standpoint, 479, 498; Sims' tenaculum, 111.
Pain, after abdominal section, 387; by mechanical vibration or pressure, 273.
Palmer, Dr. E. R., circumcision without caine, 345.
Palpatometry, 692.
Pancoast, Dr. W. H., dinner to, 45.
Pancreas, surgery of, 88.
Pancreation, 473.
Papilloma of the trachea, 461.
Paralysis agitans without shaking, cerebral, in children, 393; children, 413; following bandage, 446; following 656; pseudo-hypertrophic, 133.
Paraphimosis, 672.
Paraplegia, ataxic, 157.
Paresis, general, 85.
Parkes' Memorial Prize, 353.
Paroccipital fissure, 389.
Paronychia, epidemic of, 684.
Parsons, Dr. A. G., syphilitic 545.
Pasteur, 104, 216; Italian predecessor
Pasteur's method, 500.
Pathologist, the, 391.
Pathology, bacterial, 533; Johns Hopkins, 328; uterine,
Peabody, Dr. G. L., endarteritis 65, 79.
Pediatrics, 77.
Pelletierine in ocular paralysis, 238.
Pelvis, multiple fracture of, 441.
Penis, retraction of, 364.
Pepper, Dr. William, book notice,
Pepsin, possible dangers from, 636.
Pericarditis, 444.
Percussion, auscultatory, 268.
Peritonitis following herniotomy, ulent, laparotomy for, 532; 386; suppurative, laparotomy tubercular, 553, 555; 356.
Perityphlitis, 151, 554.
Perry, Dr. Alfred W., parasitic skin 402.
Perry, Dr. M. R., scarlet fever, 546
Perspiration, excessive, of the hands,
Pessary, intra-uterine, 111.
Peters, Dr. John C., uræmia, 543.
Phelps, Dr. A. M., excision of knee-joint,
Phenylhydrozine, the new test for sugar,
Philadelphia County Medical Society,
Phillips, Dr. W. C., throat applicator,
Phlebotomy, hepatic, 269.
Phlegmon, abortive treatment of, 59
Phosphates, utility of lime, 128.
Phthisical lung injected with carbolic dine, 665.
Phthisis pulmonalis, 246, 536, 519, 71 fissure in, 337; and rectal injection sulphurous gas, 494; bronchial, pulmonary, dietetics of, 503; hæmo tude, treatment of, 708; hydrobr acid in, 532; in fowls, 518; iodi in, 152; intra-pulmonary injection 581; laryngeal, 453; pulmonary, vous affections of, 135; pills against treatment by rectal medication,
Physical training, 502.
Physician, not a good opening for,
Physicians' fees, 444; interests, 252; in Russia, 363; mortality among,
Picrotoxin, 503.
Pins for hare-lip, 707.
Piping, Dr. W. C., nævus of the ear,
Pittsburgh Medical Review, 712.
Pityriasis rubra, 306.
Plaster-of-Paris jacket, 70.
Pleurisy, acute, 392; diaphragmatic,
Plumbing, 213.
Pneumatic cabinet, 112.
Pneumonia, 51; antipyrine in, septic treatment of, 577; at one and five years of age, 473; young children, 570.
Pneumotomy, 687.

Poisoning, from corrosive sublimate in obstetric practice, 345; unusual case of, 524.
Poison-ivy, 157.
Poisons, in food and drink, 237.
Poliorrhomenitis, serous, 97.
Polk, Dr. W. M., Alexander's operation, 1, 27; periuterine inflammation, 309.
Pooley, Dr. Thomas R., epithelioma of the auricle, 563.
Post, Dr. G. E., stomach irrigation, 95.
Post, Dr. Wm. H. B., notice of death of, 551.
Post-decapitation phenomena, 56.
Post-graduate study in New York, 364.
Post-partum troubles in American women, 643.
Potassium, bromide, death from, 531; chloride, 336; nitrate, in acute rheumatism, 152; permanganate of in amenorrhœa, 10; permanganate in burns and frost-bites, 348.
Powers, Dr. Charles A., laparotomy in gun-shot wounds, 109; toy-pistol wounds, 198.
Practitioners' Society of New York, 79, 413, 581, 693.
"Prairie Itch," 214.
Pregnancy, abdominal, gastrotomy in, 329; diagnosis of, 386, 387; extra-uterine, 112, 330; salivation of, 446; vomiting of, 434, 436; with anteversion, 446.
Prescriptions, accuracy in compounding, 194.
Prettyman, Dr. J. S., syphilis from vaccination, 516.
Prize, Merritt H. Cash, 266.
Prizes at Academy of Medicine, Paris, 717.
Procidentia uteri, 387.
Profanity, homœopathic treatment of, 280.
Prognosis, dangers of, 111.
Proprietary remedies, 465.
Prostate, function of the, 322.
Prostatitis, casts and albumin in, 94.
Pruritus ani, 152; from use of coffee, 630.
Pseudarthrosis, 436.
Psoriasis, 304; in a child, 8.
Pterygium, Agnew's operation for, 670.
Pulse, frequency of, 709.
Purdy, Dr. Alfred S., obituary, 131.
Purdy, Dr. Charles W., book notice, 160.
Purpura hemorrhagica, 346.
Purrington, W. A., evolution of the apothecary, 281; is dentistry a specialty of medicine, 642; statutes regulating the practice of physic and surgery, 449.
Putnam-Jacobi, Dr. Mary, hysteria, 365, 396, 429.
Putrefaction, 710, 714.
Pyo-salpinx, 163, 200.

Q

Quackery, organization of, 689; proprietary, 616.
Quarantine, revenue and national, 14.
Quinby, Dr. F. E., belching inflammable gas, 616.
Quinine, as an anaphrodisiac, 489; by synthesis, 361; in typhoid fever, 53, 561, 581, 670; rash, 569; whooping-cough, 16, 234, 319; to disguise the taste of, 140, 447.

R

Rabies, cured, 381; frequency of in Paris, 84; microbe of, 16, 81, 213.
Rachitis, clinical picture, 11.
Radius, congenital bilateral dislocation of, 347.
Rag question settled, 129.
Railroad employees, the health of, 711.
Ralfe, Dr. Charles H., book notice, 132.
Raphael, Dr. H., notice of translation by, 664.
Rattlesnake bite, 465.
Raynaud's disease, 99, 572.
"Rectal expression," 159
Rectum, congenital tumor of the, 67; malformation of, 707; tuberculous disease of, 339.
Reed, Dr. Boardman, foreign bodies in the intestines, 601.
Register, Medical, book notice, 132.
Remedies, new, 503.
Resorcin, 272, 304.
Respiration, artificial, 211.
Retina, thrombosis and perivasculitis of vessels of, 161.
Retinæ, incongruence of the, 474.
Retinitis, albuminuric, 191; exudative, 161; pigmentosa, 162.
Reynolds, Dr. Edward, asphyxia of the newborn, 346.
Rheumatic diseases, 580.
Rheumatism, 40, 337; acute, 152, 209; affecting one side, 235, 684; chronic deforming, 45; gonorrhœal, 209; ichthyol in, 349.
Rhode Island Medical Society, 15.
Rhus, constitutional effects of, 601; poisoning by, 252, 319, 489.
Richards, Dr. Huntington, mastoid disease, 654.
Richardson, Dr. Joseph G., notice of death of, 606.
Richmond County Medical Society, 185.
Rickets, 47; spasm of glottis in, 22.
Riley, Henry A., Esq., medical cases, 564.
Ringworm in a new-born infant, 16.
Riverside Hospital, Yonkers, 129.
Rivers, pollution of, 359.
Roberts, Dr. John B., cataract extraction, 158.
Roberts, Dr. J. C., asphyxia of the newborn, 123.
Roberts, Dr. J. S., resuscitation of the newborn, 474.
Roberts, Dr. William, book notice, 132, 411.
Robinson, Dr. Beverley, galvano-cautery battery, 82.
Rockwell, Dr. A. D., somnambulism, 514.
Rodman, Dr. John, gun-shot wound of the knee, 67.
Rogers, Dr. H. C., kava kava in gonorrhœa, 45.
Roman law and medical practice, 221.
Rosewater, Dr. Charles, vaccination from syphilitic without syphilitic infection, 683.
Rötheln, 183, 275.
"Rough on Rats," 266.
Rubella, 275.
Rumination, 122.
Rupp, Dr. Adolph, advertising a specialty, 587.
Russell, Dr. William, book notice, 159.

S

Sachs, Dr. B., notice of translation by, 239.
Salembroth, 73.
Salivation in pregnancy, 446.
Salt, intra-venous injections of, 307; subcutaneous injection of solution of, 503.
Sarcoma, lymphadeno, of the neck, 459; of the breast, 192; of the conjunctiva of cornea, 189; of the ovary, 199; retro-peritoneal, 105.
Sardines, acute poisoning from, 166, 320.
Satlee, Dr. W. E., accidental cure of hydrocele, 516.
Scabies, 303.
Scarpalogy, 196.
Schapps, Dr. John C., wound-drainage, 599.
Schiff, Dr. H. J., cocaine in minor surgery, 460.
Schram, Dr. Charles, cocaine, 544.
Schroeder, Dr. Carl, book notice, 467.
Scleroderm, 305.
Sex in utero, 52, 74.
Sexton's operation for radical cure of otorrhœa, 581.
Sharp, Dr. L. N., asphyxia of the new-born, 10; painful hypertrophy of the breast, 516.
Shoe for lame feet, 501.
Shortening of the round ligaments, 1, 27.
Simpson, Dr. F. T., malformation of the rectum, 707.
Singer, Dr. M., antipyrin in sunstroke, 344.
Skeletons, 195.
Skin, a new disease of, 214, 266; care of, 517; disease of in America, 690; parasitic disease of, 402; irritation of, by dyed hosiery, 574; trophoneurosis of, caused by injury of the median nerve, 304.
Sleep, 75; hysterical, 532.
Sleeping, in the woods, 474; with the head low, 156.
Small-pox, 672.
Smith, Dr. Andrew H., malarial affection simulating Basedow's disease, 569.
Smith, Dr. Fred. S., poison-ivy, 157.
Smith, Dr. Howard, applications to the posterior nares, 152.
Snakes, deaths from, in India, 279.
Sodium chloride and gout, 473.
Solanine, 577.
Somnambulism, 514.
Sooy, Dr. J. M., confusion in the treatment of scarlet fever, 195.
Sordes, solvent for, 461.
Sorrel, poisoning from, 235.
Souther, Dr. W. P., uniting of severed digits, 476.
Sparteine, sulphate of, 392.
Spasm, facial, painless, 135.
Spayers run mad, 266.
Specialty, the question of advertising one, 495.
Speculum, nasal, 361; vaginal, 671, 716.
Speier, Dr. H., how to preserve the dead body, 308.
Spine, dislocation of, 683; fracture of, 547.
Spleen, successful extirpation of, 437; first excision of, in Spain, 713.
Spongio-piline for varicose ulcers, 503.
Spoons, paper, for eye-drops, 168.
Sprains, 685
Sputa, a suggestion concerning the examination of, 710; tuberculous, virulence of, 560.
Squire, Balmanno, book notice, 159.
Squires, Dr. George W., unusual susceptibility to ether, 95.
St. Luke's Hospital, 354.
St. Mary's Hospital, London, 420.
Starr, Dr. Louis, book notice, 411.
Starvation, voluntary, 405.
State Board of Health, 661.
Statutes regulating physic and surgery in New York, 449.
Step, length of, 525.
Sterility, 636; and obesity, 56.
Stevens, Dr. George T., 74.
Stevens, Dr. J. F., meningitis, 10.
Stickler, Dr. J. W., death from inhaling the fumes of nitric acid, 185.
Stockham, Dr. Alice M., book notice, 411.
Stomach, Billroth's operations on the, 215; cancer of the, 523, 657; irrigation of the, 95; lavage of the, 10.
Stomach-pump, 434.
Stone, Dr. Ralph L., notice of death, 550.
Strabismus, advancement of Tenon's capule in, 191.
Stranger's cold, or murri-murri, 392.
Streeter, Dr. F. B., radical cure of hernia by a bubo, 152.
Stricture, and gleet, 112; by suggestion, 268; urethral, electrolysis in, 49, 300, 341.
Stuart, Dr. F. H., substitute for circumcision, 644.
Stubbert, Dr. J. E., malarial hæmaturia, 263.
Students in Germany, 476.
Strophanthin, 672.
Strophanthus, 693.
Sublimate, injections, another death from, 713; solutions, danger from use of, 40.
Suicide in Mexico, 532.
Suicides, 500.
Summers, Dr. J. E., peritonitis after herniotomy, 601.
Sunstroke, failure of antipyrin in, 344.
Suppuration, 701, 714.
Surgeon-General of the Army, 605.
Surgery, tendency of modern, 240.
Surgical operations, feeding after, 302, 673, 693; sensations, 633.
Swasey, Dr. G. B., embolism of the medulla, 181.
Swine-plague, 324.
Syncope, danger of, in hot baths, 570.
Synovitis, 559.
Syphilis, aborted, 211; can it be transmitted to animals? 41; cerebral, 421, 443; clinical notes on, 653; excision of primary sore to prevent, 321; from vac-

cination, 516; hemorrhagic of the newborn, 435; infrequency of secondary contagion, 674; intra-muscular injection of mercury in, 405; the microbe of, 83.

T

Tabes, pseudo, in arsenical poisoning, 135.
Tait, Mr. Lawson, and Schroeder, 381; in a peck of trouble, 679.
Tait's operation, 385.
Talent, sudden development of, 621.
Tampon, strange, 140.
Tape-worm, 123, 381; artificial, 374; movements of, outside of the body, 263; multiple, 112.
Tapping, cannula for, 501.
Taylor, Dr. J. E., book notice, 159.
"Trained Nurse," 632.
Tea, 4.
Teeth, action of tincture of iron on, 95; bakers', 616; effects of mental overwork upon, 194.
Temperance hospital, 266.
Temperature, low, 112; new method of taking, 195.
Tenaculum, modified Sims, 111.
Tendon-jerk, 19.
Teneriffe as a health-resort, 280.
Tenon's capsule, advancement of, 375.
Tenotomy, immediate restoration of parts to their normal position after, 320.
Testicle, dislocation of, 377.
Testicles, death caused by sudden blow upon, 491.
Testis, dermoid cyst of, 571.
Test-type, 162.
Tetanilla, 468.
Tetanus, 556; puerperal 685; traumatic, 237, 405, 445.
Tetany, 24, 467.
Thallin, sulphate of, 503.
Thames, pollution of the water of, 277.
Therapeutic nihilism at Vienna, 193.
Therapeutic notes, 336.
Therapeutics, gastric, 98; principles of modern, 589.
Thompson, Dr. J. A., nasal illuminator, 530.
Thompson, Sir Henry, book notice, 132.
Thompson, Dr. W. G., the study of cardiac drugs, 261.
Thomsen's disease, 521, 583.
Thornton, Dr. J. B., death-penalty, 223.
Thyroiditis, rheumatismal, 685.
Tibia, exsection of, 697.
Tilley, Dr. Robert, laparotomy in abdominal wounds, 53.
Tilton, Dr. H. R., embalming, 476.
Tinnitus aurium, 560.
Tipton, Dr. F., amenorrhœa and delirium tremens, 10.
Tobacco, 4, 447; consumption of, in Europe, 363.
Tolman, Dr. H. L., improved method of staining tubercle bacilli, 457.
Toner Library, 438.
Tongue, in disease, 83; removal of entire, 547; the geography of, 129; tuberculosis of, 347.
Tonic, new cardiac, 238.
Tonsils, functions of, 236.
Toothache, 167.
Torrey, Dr. W. S., sarcoma of the neck, 459.
Torticollis, congenital, 28.
Trachea, papilloma of, 461.
Tracheotomy and intubation, 280; insufflation of iodoform after, 238; for hæmoptysis, 168, 475.
Trans. Med. Soc. of the State of New York, 523.
Transfusion, use of sugar solutions in, 446.
Treatment, injurious remote effects of, 244.
Treves, Mr. Frederick, notice of book edited by, 160.
Trichinosis in Germany, 410.
Triplett, Dr. William H., book notice, 412.
Trow, Dr. W. M., asphyxia of the newborn, 458.
Tuberculosis, 46, 81; prevention of general by removal of local, 153.
Tulipine, 504.
Tumors, abdominal, with fluid contents, open treatment of, 125; deep, in the back, 677; of the mesentery, 687; treated by phenic acid, 544.
Turpentine, for malignant tumors, 336; in indigestion of children, 547.
Typhoid conditions of salicylic acid, 573.

U

Ulcer, circular gastric, 571; lingual, 235; of the leg due to bromide, 575; peculiar, due to bromides, 469; the pendjeh, 156.
Ulcers, antipyrin in the treatment of, 489; treatment by carbolic spray, 321; varicose, 503.
University of Sydney, 216.
Urethra, anatomy of the human, 659; spasmodic stricture of, 122.
Uræmia, new theory of, 543.
Urea, elimination in cancer, 718.
Urinal for vesico-vaginal fistula, 251.
Urine, test for bile in, 474; toxic, 301.
Uterus, cancer of, 560; etiology of flexions and displacements of, 299; fibromata of, 684; inversion of, with a large fibroid, 348; pathology of, 179; removal of appendages of, 198, 332; rupture of, 572; slough from, produced by chloride of zinc, 697.

V

Vaccination and revaccination, 275; from syphilitic child without syphilitic infection, 683; in Japan, 194; syphilis from, 516; tested by Paul Bert, 672.
Vaccine, culture in mushroom jelly, 308; superiority of animal, 359.
Vagina, hyperæmia and phlegmons of, 321; as a receptacle for food, 713.
Vaginitis caused by ants, 168.
Valerian in diabetes, 268.
Vanillism, 108.
Varicella, micro-organism of, 634.
Varicocele, 558; radical treatment of, 317.
Varix of labium, 546.
Veeder, Dr. M. A., malaria and water-supply, 334; quinine rash, 569.
Vegetables, medicinal qualities of, 709.
Veins, excision of, 447.
Venereal diseases, spurious, 573.
Venereal infection a crime, 495.
Vermiform appendix, 24; perforating inflammation of, 602.
Vertigo of the kajak, 577.
Vesicular-murmur, 127.
Veterinary work for physicians, 662.
Viscera, transposition of abdominal, 612.
Vitapathy, 519.
Vitreous, non-formation of in both eyes, 191.
Vomiting of pregnancy, 434, 436.

W

Waitzfelder, Dr. E., bitemporal hemianopsia, 568.
Wakley, Dr. James G., obituary, 328.
Waring, Dr. Edward John, book notice, 466.
Warlomont, Dr. E., book notice, 66
Warren, Dr. J. Collins, book notice,
Warts and Epsom salts, 616.
Washburn, Dr. W., cod-liver oil, 47
city charities, 718.
Washington doctors, 168.
Washington Obstetrical and Gyneco Society Officers, 496.
Wasp, death from the sting of, 447.
Water, hot, as a hæmostatic, 406; hot, in corneal and conjunctiv tions, 189.
Watermelon cure, 195; diuretic ac 210.
Water-supply of European cities, 44
Watson, Dr. B. A., 15.
Webster, Dr. David, vision destroy gun-cap, 94.
Weeks, Dr. J. E., ophthalmia neon 90.
Weiss, Dr. Ludwig, abortive treat phlegmon, 597.
Wellner, Dr. George C., correspo 84.
Wells, Dr. Brooks H., the vaginal lum, 716.
Wens, simple method of removal of,
Wesley, Rev. John, as a physician, 6
Western Railroad hospitals, 713.
Wet-nursing, 505; *vs.* artificial feedi
What can we cure? 223, 416.
When is a man drunk? 672.
White, Dr. George, rhus-poisoning,
White, Dr. John Blake, antipyrin analgesic in headache, 293; in monary injections, 536.
Whitehead, Dr. W. R., cleft palate hip-joint disease, 679.
Whitlow, melanotic, 437, 685.
Whooping-cough, 126, 208, 319, 692; ca acid in, 196; narceine in, 70; q in the treatment of, 16, 234, 319.
Why some young doctors go to Europe,
Wilcox, Dr. T. E., ivy-poisoning, 222.
Wilder, Dr. Burt G., parooccipital fiss 389.
Williams, Dr. F. S., constitutional sympt from cocaine, 346.
Williams, Dr. R. G., rhus-poisoning, 31
Williams, Dr. T. R., malformation of ear, 151.
Willow, cultivation of, 391.
Wilson, Dr. J. R., quinine in typhoid f 670.
Wilson, Dr. R. B., plugging the post nares, 575.
Winsor, Dr. L. C., rhus-poisoning, 320
Winternitz, Dr. J. A., gleet and iodo 706.
Winters, Dr. Joseph E., maternal and nursing, 505, 525, 638.
Witthaus, Dr. R. A., book notice, 664
Womb, photographing the, 140.
Woman, an old, 405.
Women, flat-chested, and higher educ 378; higher education of, 187.
Women's hospital in Bombay, 476.
Wood, Dr. Halsey L., general paresis,
Worm, round, 404.
Wound of the orbit, 377.
Wounds, laparotomy for gunshot abdomen, 109, 215; toy-pistol, 320.
Wound-drainage, 599.
Wright, Dr. George S., correspondence,

Y

Year-book of treatment, 159.

Z

Zoster, paroxysmal symmetrical, 153.

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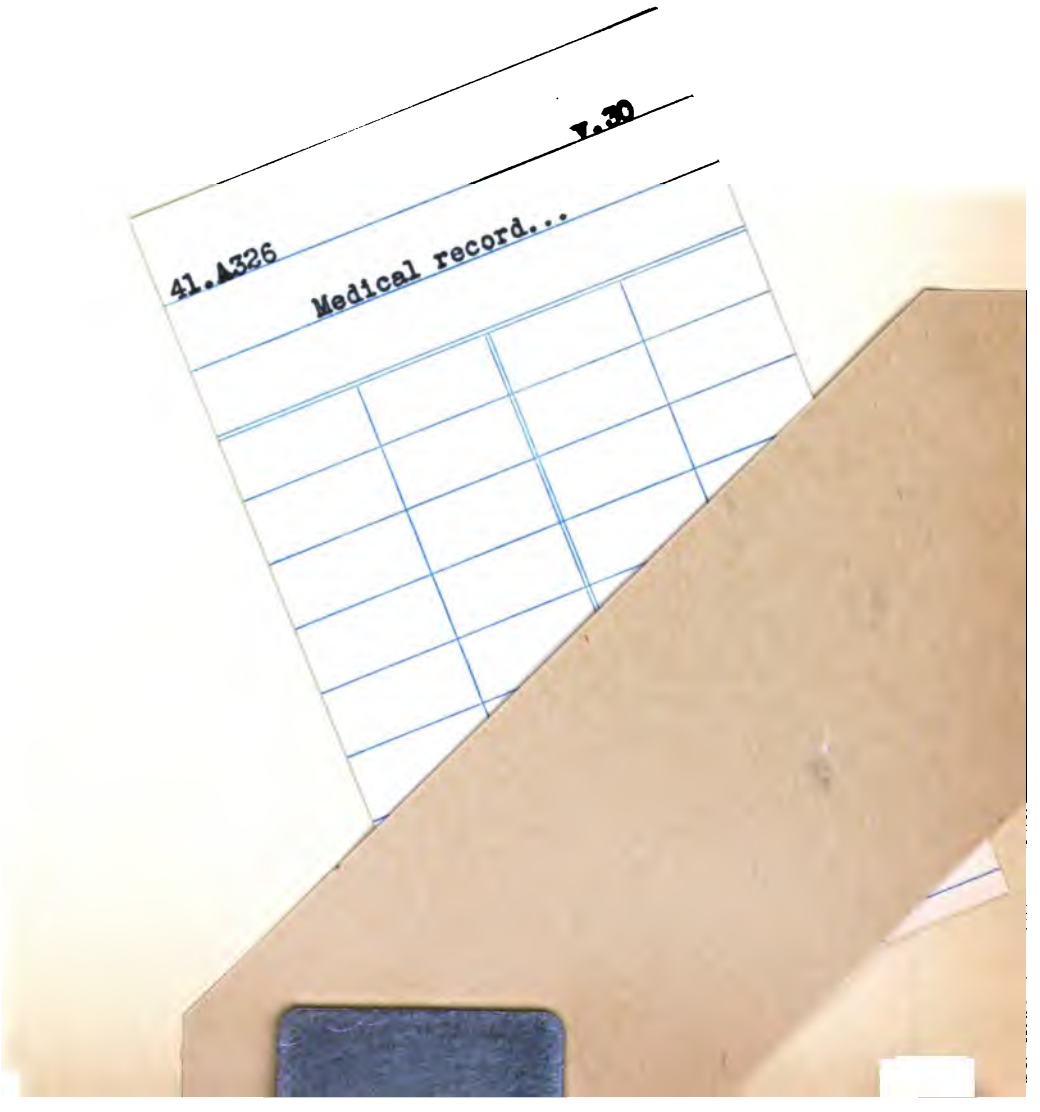
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